

5.6 Keyers Menus

The Keyer menu controls are organized into several subcategories, each with different menu selection based on the type of key. These menus are accessed by touching the **Keyer** button in the Home menu. Keyer selections like key type, **Key Invert**, **Matte Fill**, can be made for any keyer from the Main panel using the Keyers subpanel. These controls are on the Main panel for immediate access.

However, key adjustment for detail, such as clip and gain, and mask controls, are accessible from the corresponding Keyer menu. The Keyer subpanels and the corresponding menus will reflect and track the changes made by either set of controls.

The Keyer menu controls are organized into several subcategories, each with different menu selection based on the type of key. These menus are accessed by selecting the appropriate keyer via the Delegation popup button, then the category is chosen from the **Mode**, **Priority** or **Mask** and **Mattes** buttons at the bottom of the menu.

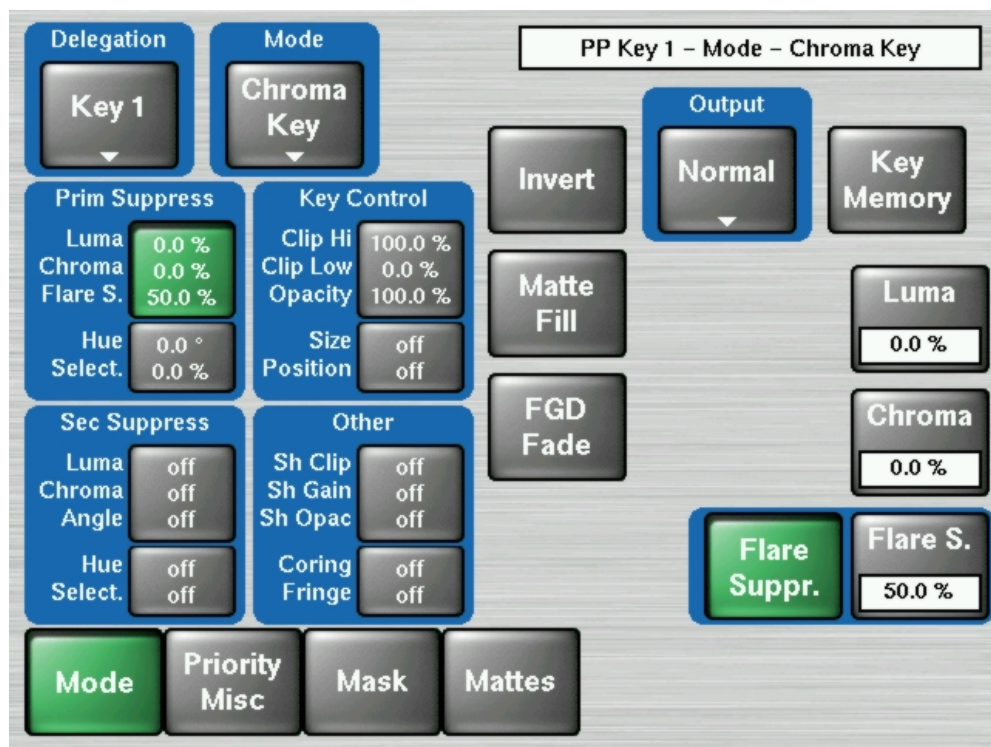


Figure 120 Keyer Menu

The Keyer menus allow to control the key generators for each of the full-function M/Es. The Keyer menus, like the Wipe menus, have a delegation area at upper left, which in this case contains the key generator selector.

5.6.1 Key Mode

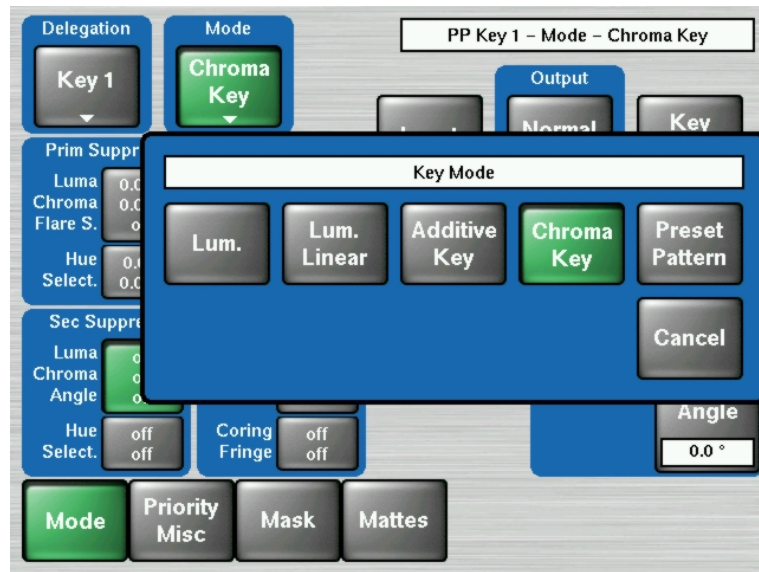


Figure 121 Keyer Menu – Mode Selection

The Mode menu allows you to select the type of key for any of the four keyers in each M/E or P/P. Touching the **Mode** subcategory button brings up the Keyer Mode menu. Touch the keyer data pad you wish to select, then select the **Mode** from one the selections described below. Key modes are selectable from the following choices:

- Luminance
- Luminance Linear
- Additive Key
- Chroma Key
- Preset Pattern

Luminance Key is used for key sources with an unshaped fill signal

Linear Key is just a shortcut for a special setting of the Luminance Key:
Gain 100% and Clip 50%

Additive Key is used for key sources with a shaped fill signal

For a complete overview on key types and adjustments, refer to section Keying on page 34.

5.6.2 Keyer Priority Misc Menu

Touching the **Priority Misc** subcategory button takes you to the Priority menu (Figure below). The Priority menu is used to change the stacking order of the keys. The parameter control area on the right has two columns, labeled **Current** and **Next**. The stacking order of the selected item in a column is controlled with the **Top**, **Move Up**, **Move Down**, and **Bottom** touch buttons. Changing the top to bottom order in the **Current** column will cause an immediate change in that keyers stacking order. The order in the **Next** column controls the order the keys will have after the next key priority transition. After the key priority transition, the **Current** and **Next** stacks will swap.

The **Key Prior** and **Key Over** buttons in the Keyer subpanel on the panel provide an alternate method for setting key priority. Refer to *Key Prior Button* and *Key Over button*.

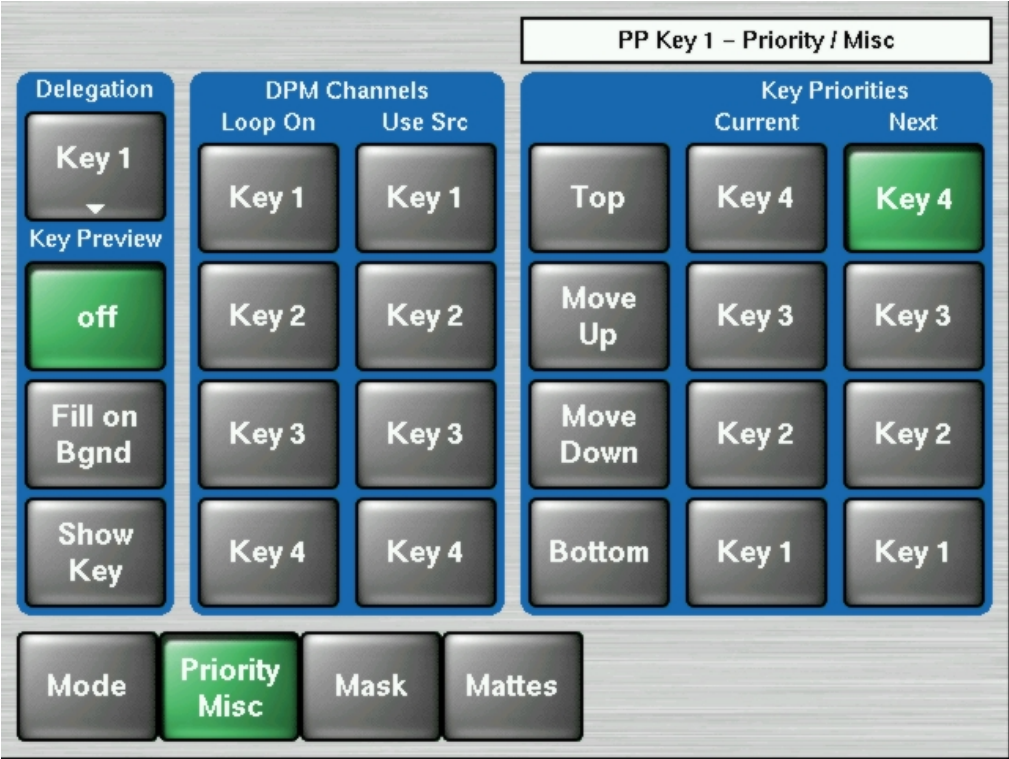


Figure 122 Keyer Menu - Priority

5.6.3 Keyer Mask Menu

Touching the **Mask** subcategory button takes you to the Keyer Mask Point of Use menu (Figure below). The Mask menu allows selection and control of the keyer mask(s). Key masking defines areas that are protected from keying (Inhibit) or always key (Force). The shape of the mask can originate from a wipe pattern generator or by a selected mask signal (typically a key fill signal delivered via the Utility bus).

The keyer delegation (**Key1 – Key4**) is made at the top left of the screen. Once a keyer has been delegated, choose the type of mask (**Force** or **Inhibit**, or both) from the data pad in the lower right corner. The example shown here is for a Wipe Force Mask on Key 1.

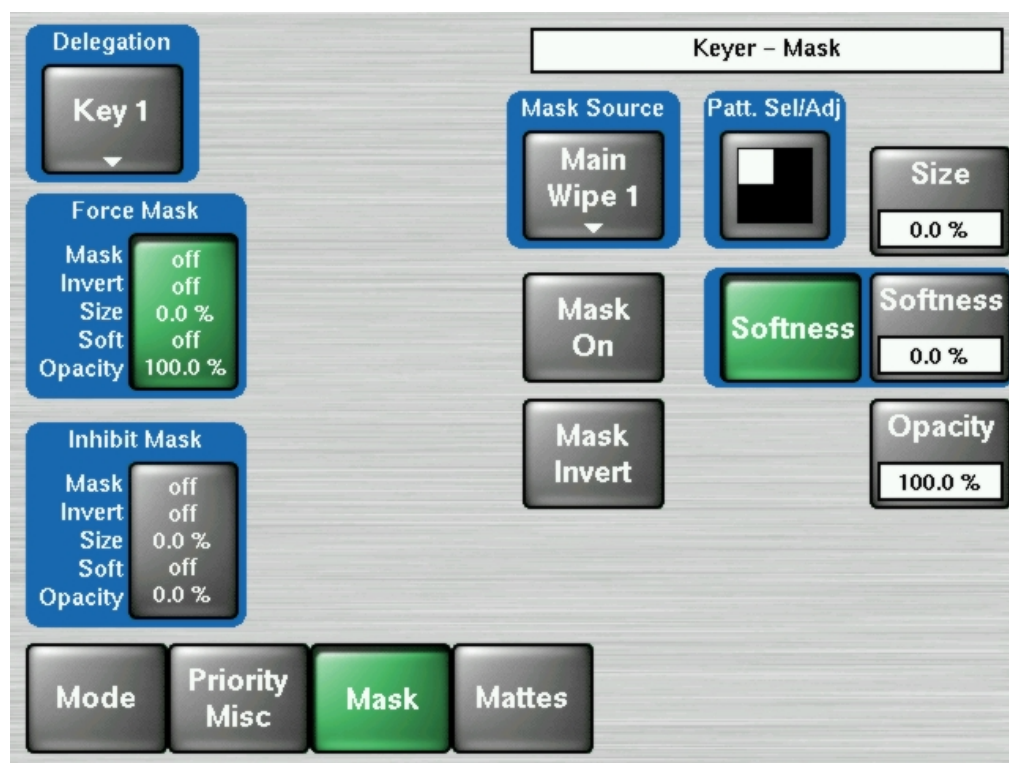


Figure 123 Keyer Menu – Mask

5.6.3.1 Mask Sources

For either type of selected mask (Force or Inhibit) five different mask sources are available and will appear as popup selection when you press the Mask Source button. Only one mask source can be selected at a time.

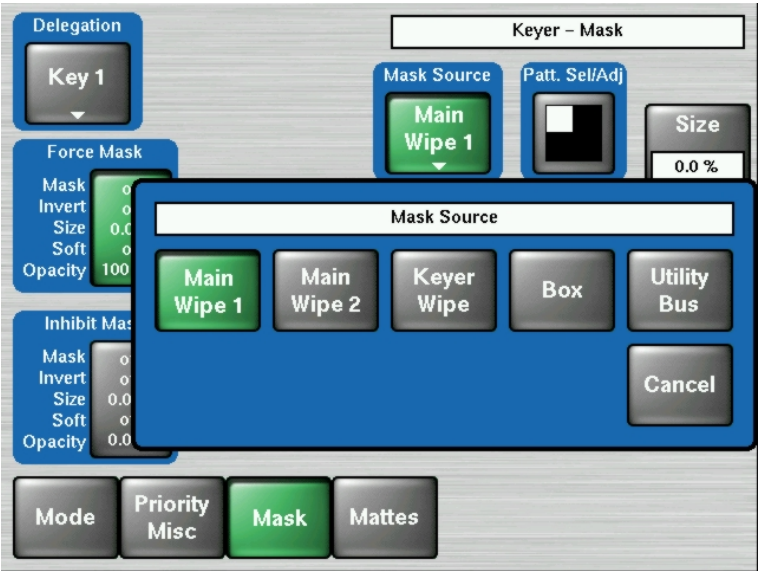


Figure 124 Keyer Menu – Mask Source

5.6.3.1.1 Box

When **Box** is selected as the mask source, you can adjust softness and opacity. The four edges of the box can be set separately.

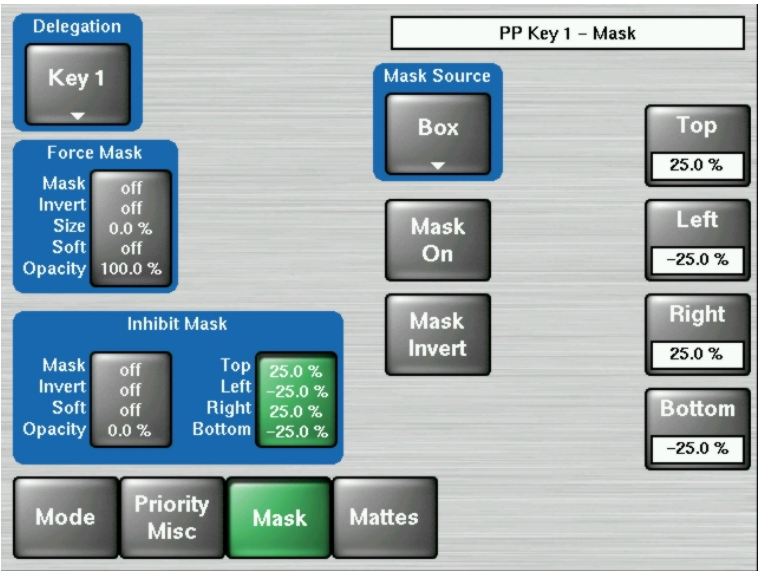


Figure 125 Keyer Menu – Box Mask

5.6.3.1.2 Keyer Wipe

A Keyer Wipe mask source allows selection of a wipe pattern from the dedicated pattern generator for the keyer. Touch the **Patt. Sel/Adj** button in the menu to bring up the wipe pattern selections available (Figure below). Select a pattern from the display. The selected pattern will appear in the **Patt. Sel/Adj** data pad window. Select the other datapads in the wipe menu to adjust pattern modifiers. These include pattern positioner, rotate, H and V multiply, and aspect controls, similar to the wipe controls. Modifiers are controlled by the soft knobs on the right of the screen.

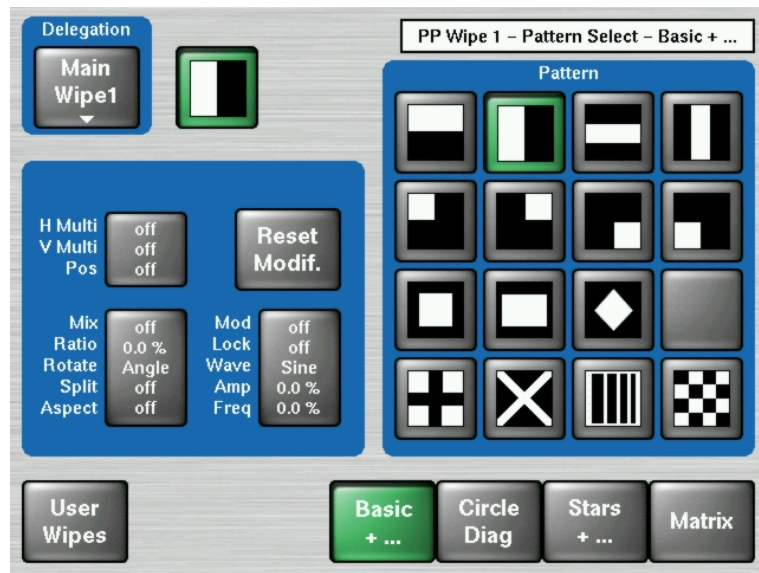


Figure 126 Keyer Menu - Wipe Mask

5.6.3.1.3 Complex Wipe 1 and 2

A mask can be generated from a complex wipe source. There are two complex wipe generators available, **Complex Wipe 1** and **2**. The pattern for the complex wipe is chosen in the same manner as the keyer wipe mask. The complex mask wipe can also be modified for position, rotation, H and V multiplication and aspect. In addition, wipes can be mixed and modulated.

Keyer and complex wipe masks must share the wipe generators with other functions with wipe capability in the switcher. This resource sharing must be considered when delegating one of the wipe generators to a mask.

CAUTION!

All controls in the Wipe1 Generator or the Wipe2 Generator affect the selected wipe pattern generator.

5.6.3.1.4 Utility Bus

The **Utility Bus** mask sources originate from the utility bus in the chosen M/E. Typically these are used to bring in garbage masks from a Still Store or some external device.

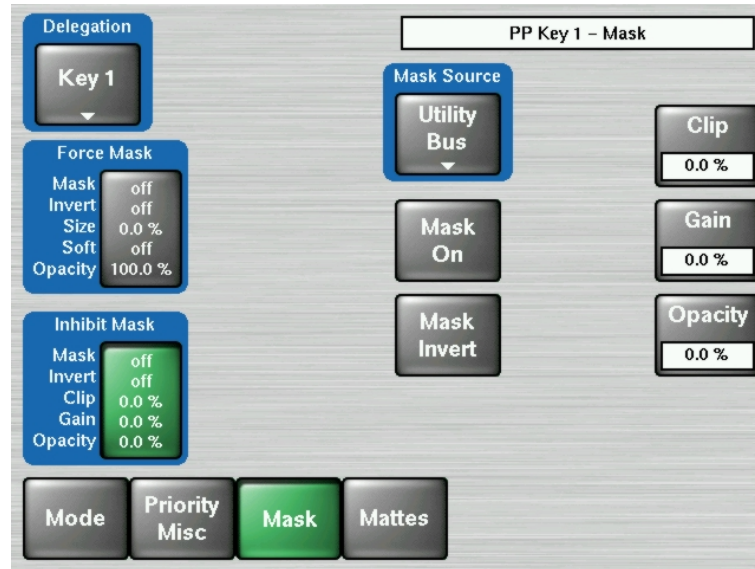


Figure 127 Keyer Menu – Utility Bus Mask

5.6.3.1.5 Mask On Button

The Mask may be turned on or off by selecting the **Mask On** button.

5.6.3.1.6 Mask Invert Button

The **Mask Invert** button inverts the sense of the delegated mask. When off, areas formerly masked will be visible, and previously visible areas will be masked. Masks are normally active in the center of the pattern. An inverted mask is active outside the pattern.

5.6.4 Keyer Mattes Menu

The Matte menus give you control over matte color, type, and appearance. There are no local matte controls on the Main panel; all matte adjustments are made in the menus. The Popup delegation button in the top left of the menu allows you to select the mattes of the different keyers. Soft knobs are provided on the right side of the menu for adjustment of matte parameters.

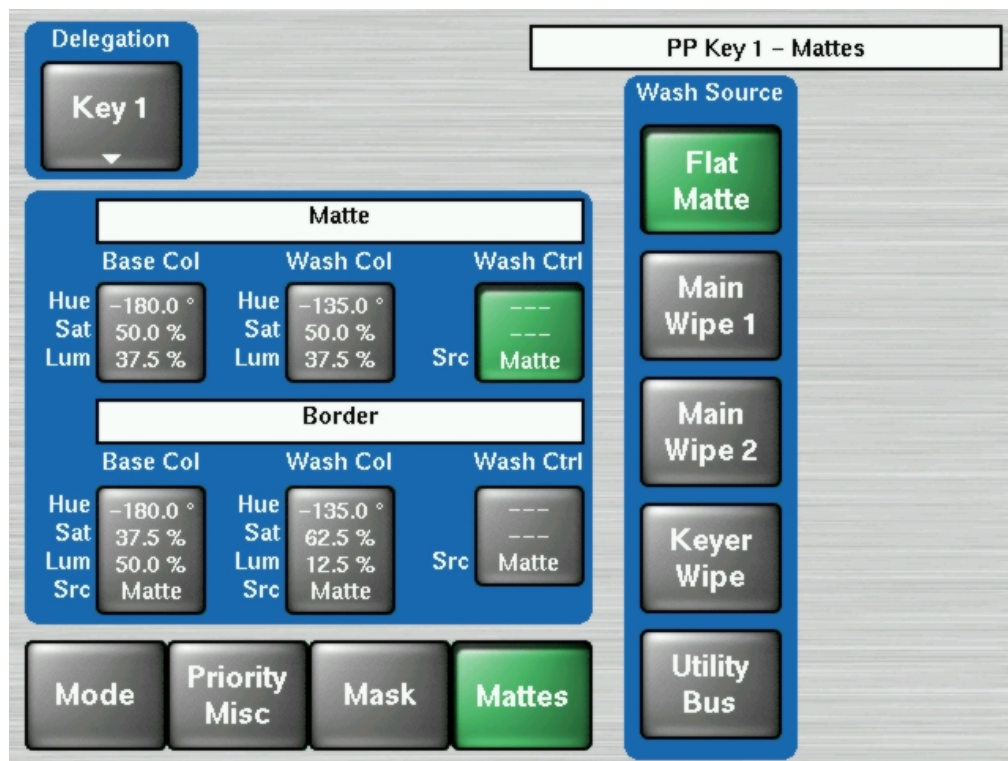


Figure 128 Keyers Mattes Menu

5.6.5 Chroma Key

When a chroma key is selected, the menu (*Figure 129*) will display a summary of all chroma key parameter values at the same time. The parameter groups should be adjusted in the following order:

1. Prim Suppress
2. Key Control
3. Sec Suppress
4. Other

After the first two parameter groups have been adjusted, a reasonable key should be visible. Subsequent adjustment steps may improve the basic key in subtle ways. See section *Chroma Key Operating Notes* on page 283 for more information on setting up a chroma key. For a concept overview of chroma keying, refer to section *Chroma Key* on page 43.

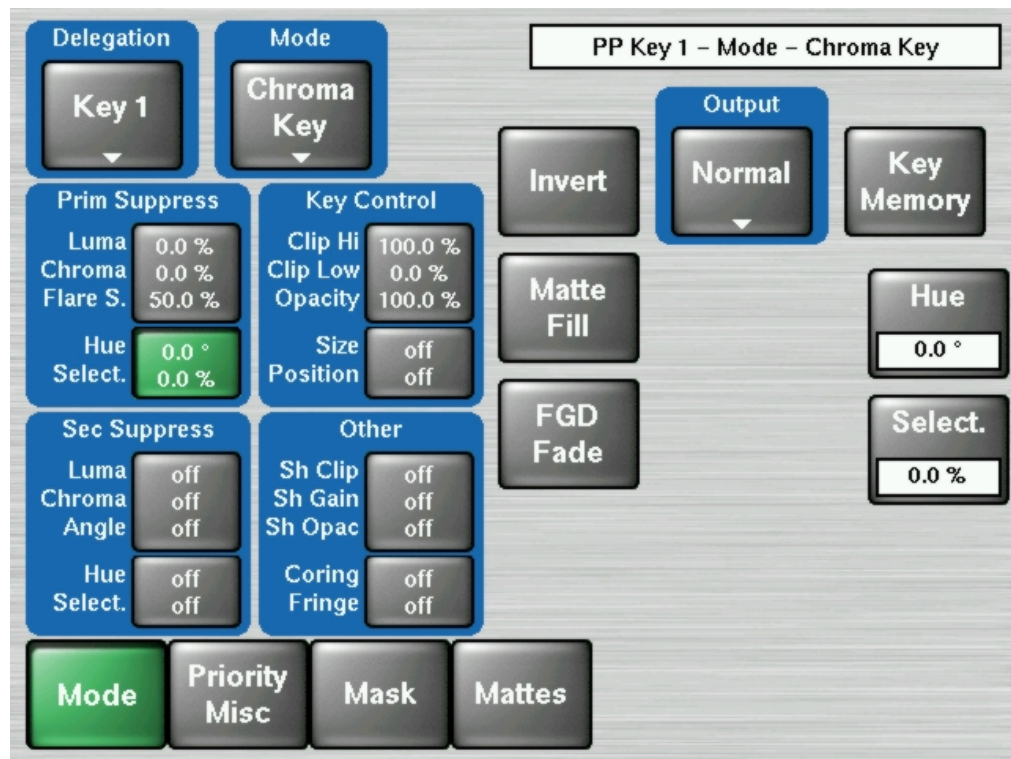


Figure 129 Keyers Mode Chroma Key Menu

5.6.6 Preset Pattern

A preset pattern uses a wipe pattern generator, rather than an incoming key cut signal to define the hole cut in the background. When **Preset Pattern** is chosen as the keyer mode, the menu will appear as in Figure below. When the **Pattern** data pad is touched, the Wipe menu (see *Wipe Menus*) will come up to allow pattern selection. The Preset Pattern may be matte-filled by touching the **Matte Fill** data pad. The matte controls can be accessed by touching the **Mattes** button. Opacity and size of the preset pattern can also be adjusted with the soft knob controls on the right of the screen.

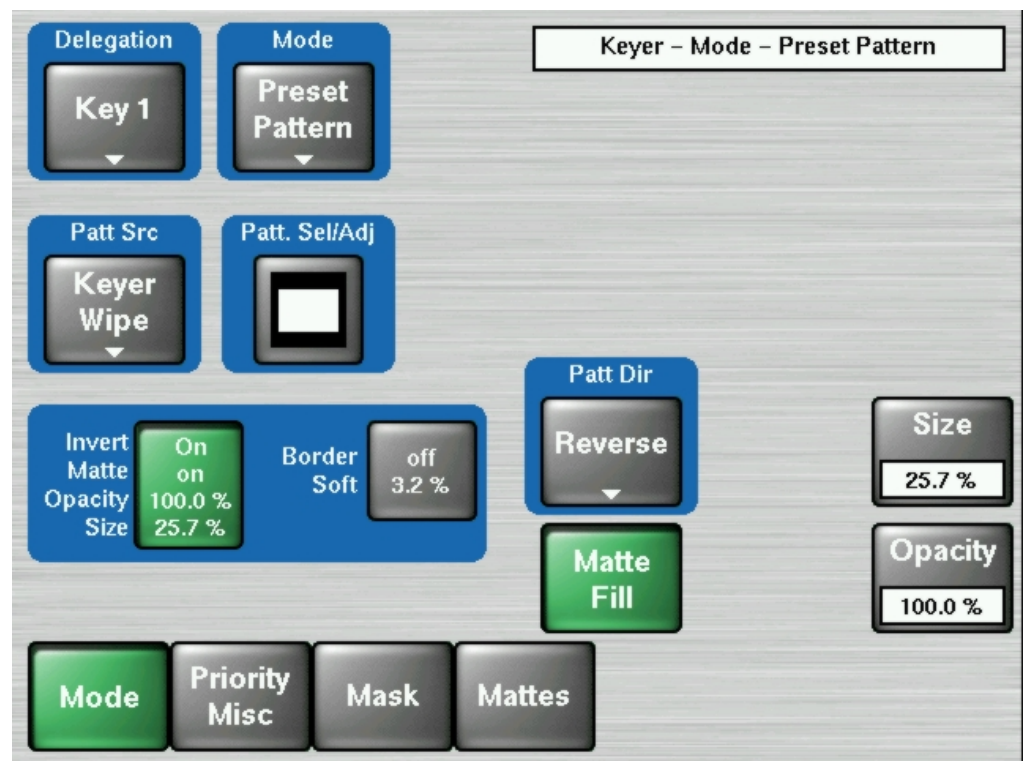


Figure 130 Keyer Mode – Preset Pattern

5.7 Background Mattes Menus

When **Bgnd Mattes** is selected, the menu displays two panes for control of Color BGD 1, Color BGD 2 and Color BGD 3, including base and wash colors, wash direction and offset, and wash edge texture attributes. Each touch pad activates the soft knobs to control those parameters.

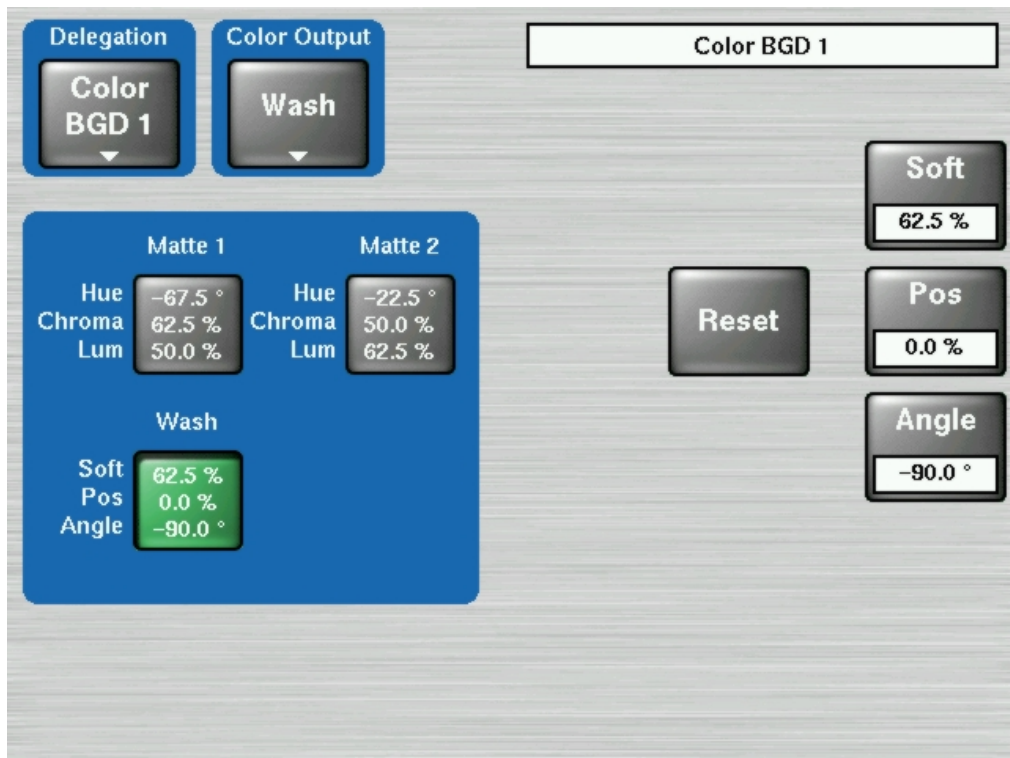


Figure 131 Background Matte Menu

Touch the **Color Output** pad, then select the desired color output:

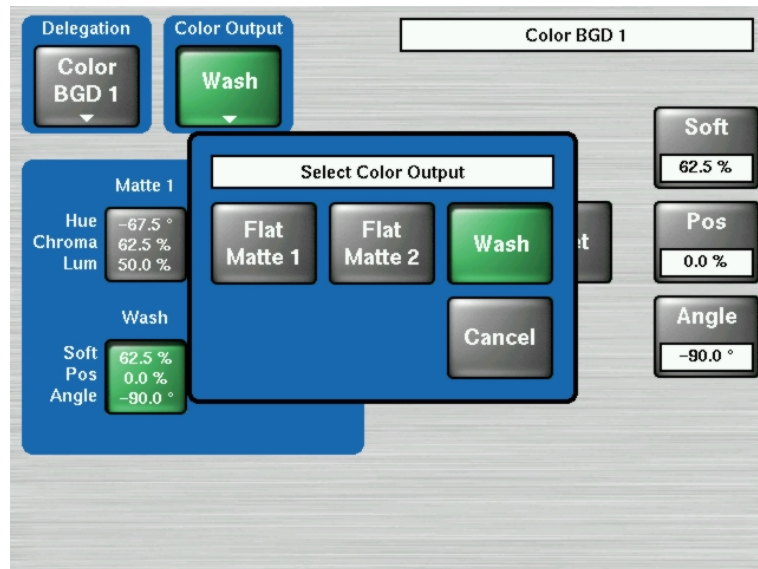


Figure 132 Background Mattes Menu - Wash

5.8 M/E Menus

The M/E menu controls are organized into two subcategories, each with different menu selection based on the type of transition. These menus are accessed by touching the **M/E** button in the Home menu. Typical selections are Pattern Source, Pattern Direction, Border and Softness.

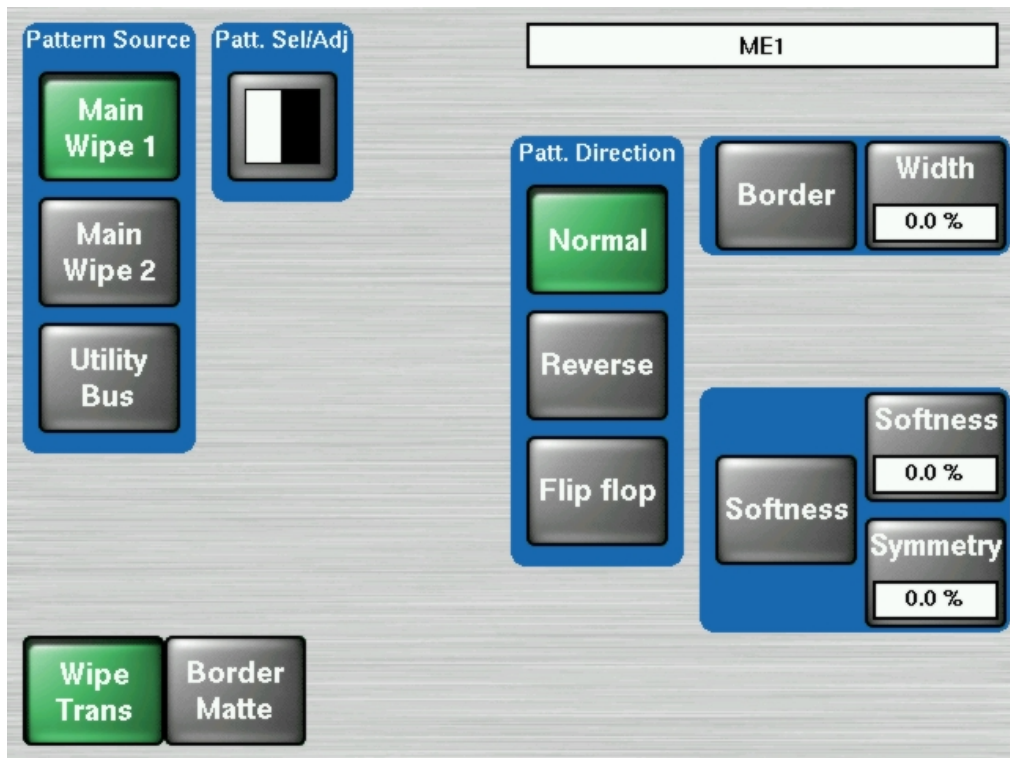


Figure 133 M/E Menu – Wipe Trans

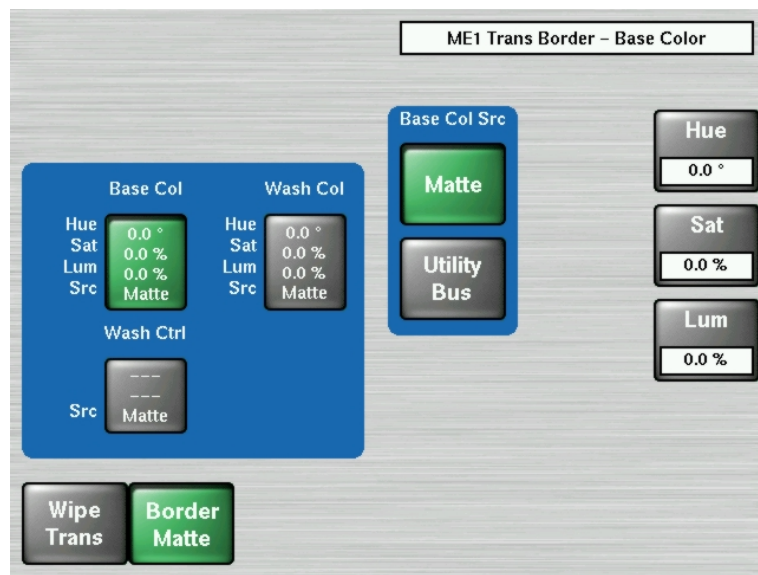


Figure 134 M/E Menu – Border Matte

5.9 YUV Bus Correction Menus

The YUV Correction menu serves to adjust brightness, contrast, saturation and color balance related to the bus.

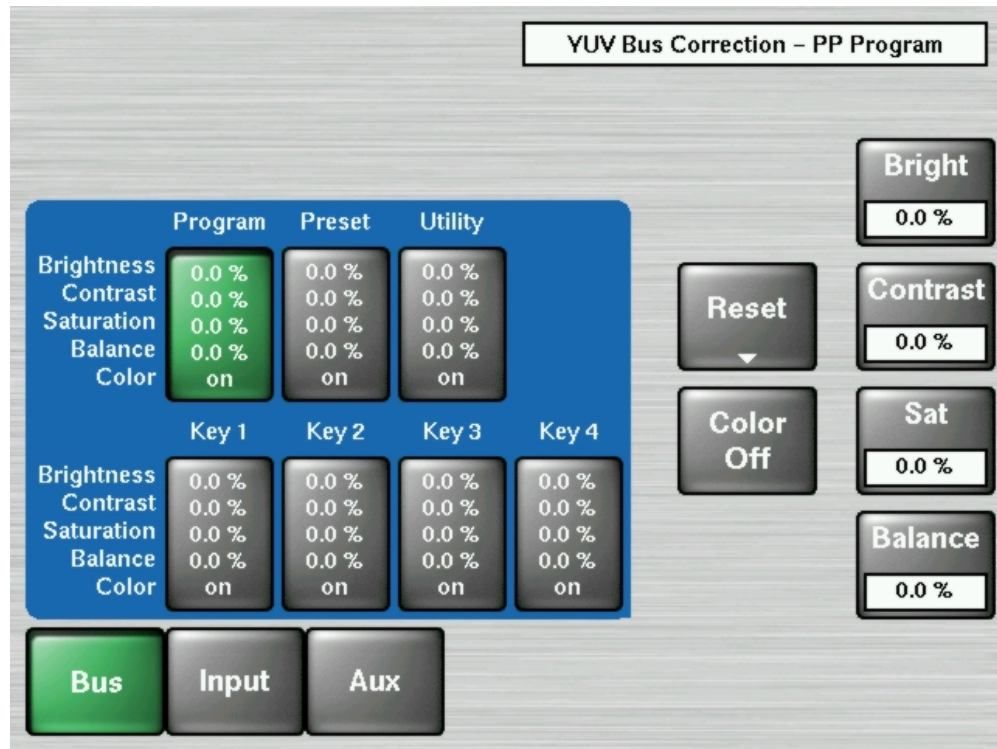


Figure 135 YUV Bus Correction Menu

The correction can be made in the following buses:

- Bus (PGM, PST, Key1 ... Key4)
NOTE!
If Bus Correction for PGM bus and/or PST bus is selected, the two settings are exchanged at the end of a fading.
- Input (all input signals)
- Aux (all Aux buses)

NOTE! Bus correction has priority over input correction.

Reset Bus

Reset the values for a single bus of the selected M/E to their default value.

Reset M/E

Reset the values for all busses of the selected ME to their default values.

Color Off

Switched the color on/off completely separate for each bus.

5.10 RGB Input Correction Menus

RGB Input Color Correction is a software enabled feature that converts the video signal on a particular video bus from color difference format to RGB (red, green, blue) color component format, applies separate offset, gain, and gamma to each RGB component, then converts from RGB back to color difference (Y, Cb, Cr) format. The color correction is applied on an input by input basis. The parameters are applied on the basis of a source and bus intersection and stored as part of source memory. A different input on the same bus or a same input on a different bus, may have different color correction.

The Color Corrector menu is used to adjust RGB color on a selected bus and input.

Corrected inputs and parameter will be displayed in a yellow style.

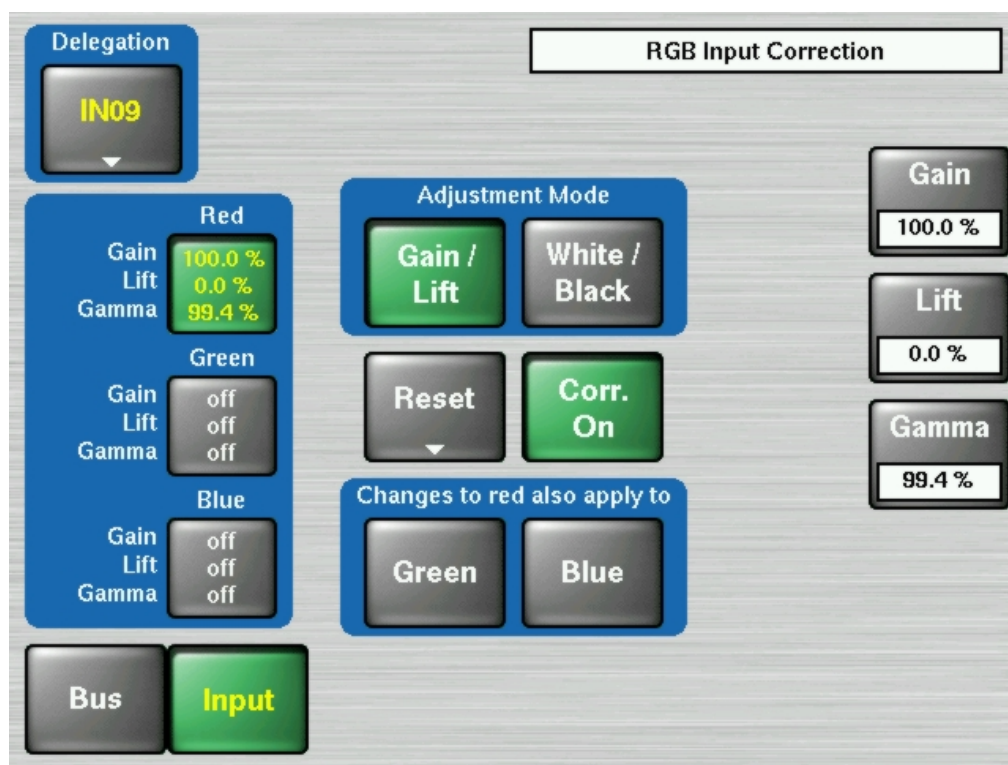


Figure 136 RGB Input Correction Menu

The Adjustment Mode pad has two buttons, the first two, **Gain/Lift** and **White/ Black**, determine the mode for the knobs and the text boxes in the Color Corrector Transfer Function pane "Red/Green/Blue".

Gain/Lift
White/ Black

Adjust a offset to Black level
Adjust Black and White in percent

When the **Reset** button is touched, the following modes can be selected:

- Reset Color
- Reset Input
- Reset all Inputs

When one of the **Red**, **Green**, or **Blue** color component's button is selected, the knobs for **Gain**, **Lift**, and **Gamma** are delegated for the specific component. For example, if Green had been selected, the knobs would control the green channel's values, and similarly for Red and Blue.

The **Changes on red also apply to** pane has two on/off buttons. The title and the button labels are dependent on the selection of the color component in the Color Corrector Transfer Function pane "Red/Green/Blue". If the user selects Blue as the color to be adjusted, the two buttons are **Red** and **Green**. When these buttons are active, the adjustments applied to the originally selected color component is also applied to the one(s) selected in the pane. For example, if the user chooses to adjust Blue and selects Red in the "Changes on Blue also apply to" pane, then any adjustments to Blue's Gamma value will be applied to Red's Gamma value.

Note that changing from Blue to either Green or Red in the Color Corrector Transfer Function panel will cancel the attachment.

5.11 DPM (Digital Picture Manipulators) Menus

The KayakDD system supports one DPM channel per keyer, that means a KayakDD-1 may have up to 4 DPM channels, a KayakDD-2 up to 8 DPM channels. For units currently shipping the DPM channel for the first keyer per ME-bank is standard, the remaining 3 channels per ME are options.

5.11.1 General

The parameters of the Digital Picture Manipulators are not stored as part of the E-MEM system. They are treated per ME-bank like external DVE channels with a separate timeline system with 100 registers. That means the switcher can recall independent an extra "t" DVE effects per ME while running an E-MEM timeline.

To offer even more flexibility the user can define per register, which of the 4 channels should be affected. E.g. register 1 could only include the DPM channel of keyer 1 running an endless loop to spin a logo while the user is able to recall independently other registers containing only channel 3+4 displaying differently sized boxes.

5.11.2 Misc. Setup Menu

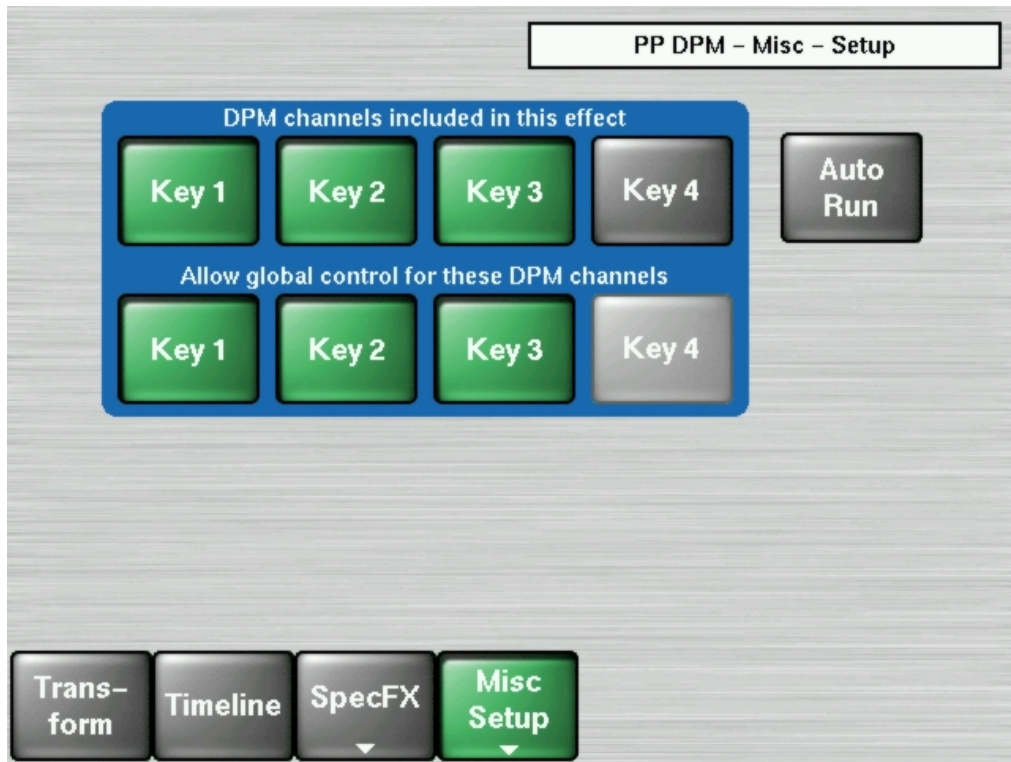


Figure 137 DPM – Misc - Setup Menu

This menu is the start menu for building an effect. In the top row you select which channels should be part of the effect. Channels that are not included will not be stored and will not be affected when the register is recalled. In the second row you can switch on global control per included channel. If global control is switched off for a global channel, that channel will not be affected by global channel parameters; e.g. by a global rotation.

AutoRun button

When AutoRun is on a recall of an DPM effect will automatically run the effect. When AutoRun is off, the run has to be triggered either in the Show Timeline menu by pressing "Play" or by pressing the cut button in the Effects area again while the section is delegated to DPM control.

The **AutoRun** button is also used when a DPM effect is recalled by an **E-MEM**.

When "on", a keyframe containing **DPM Eff. No** in the Define Memo will trigger an immediate run of the relevant DPM effect. (Define memo is set in the E-MEM define memo menu.)

When "off", a trigger has to be set to run the effect (in current software this is only possible via the Sidepanel program).

In the Key – Priority – Misc menu you can switch on DPM effect loop for the chosen keyers (**Loop On**) and select the flipside of an effect (**Use Src**). This information is not part of a DPM effect and should be set manually or recalled by an E-MEM recall (like the keyer parameter settings).

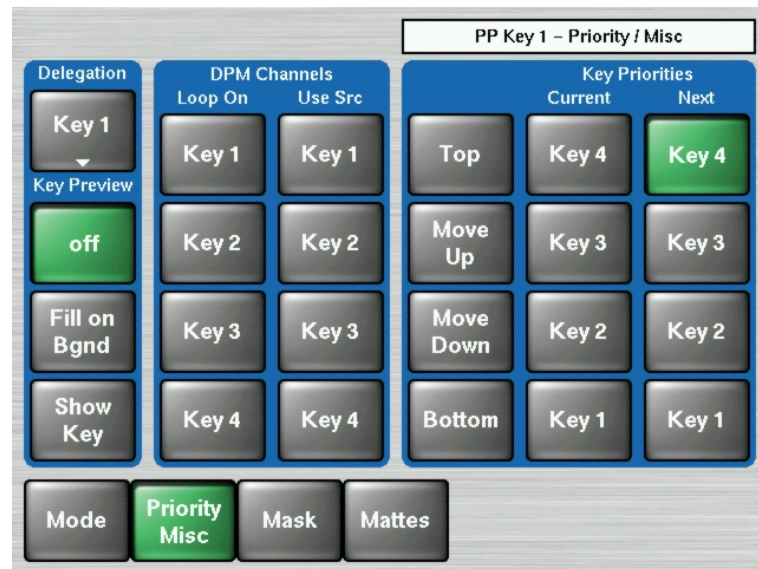


Figure 138 *Key Selection for DPM Channels*

5.11.3 Drop Shadow

The Drop Shadow feature is turned on with the Drop Shadow button. When turned on, soft knob controls become available on the right. Different soft knob controls appear, depending on which data pad has been selected in that pane. The current parameter names and values are displayed on each data pad.

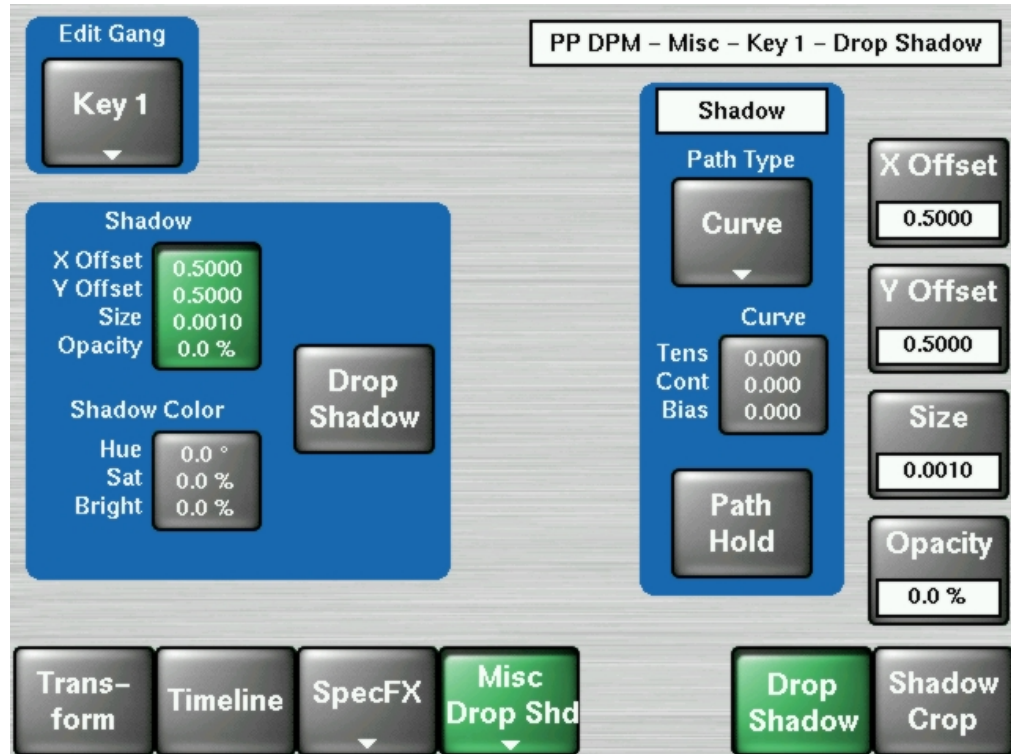


Figure 139 DPM - Misc - Drop Shadow 1

When **Shadow** is selected soft knobs for **X Offset**, **Y Offset**, **Size**, and **Opacity** are available. See figure above.

When **Shadow Color** is selected soft knobs for **Hue**, **Saturation**, and **Brightness** are available.

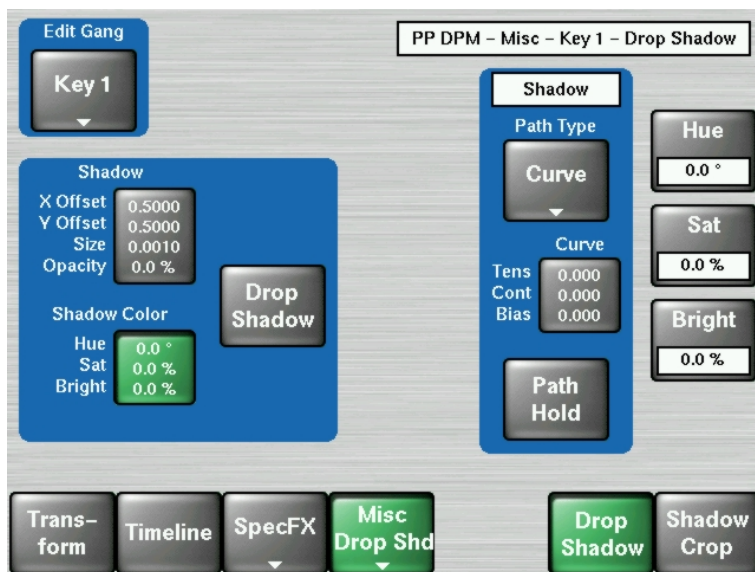


Figure 140 DPM – Misc – Drop Shadow 2

Drop Shadow Controls

The DPM button near the 3D positioner delegates it to drop shadow control. The 3D positioner X and Y axis adjust the drop shadow offset from the primary image and the Z axis controls the size of the drop shadow.

5.11.3.1 Shadow Crop

The **Shadow Crop** controls are used to adjust shadow cropping and edge softness. The current parameter names and values are displayed on the data pads.

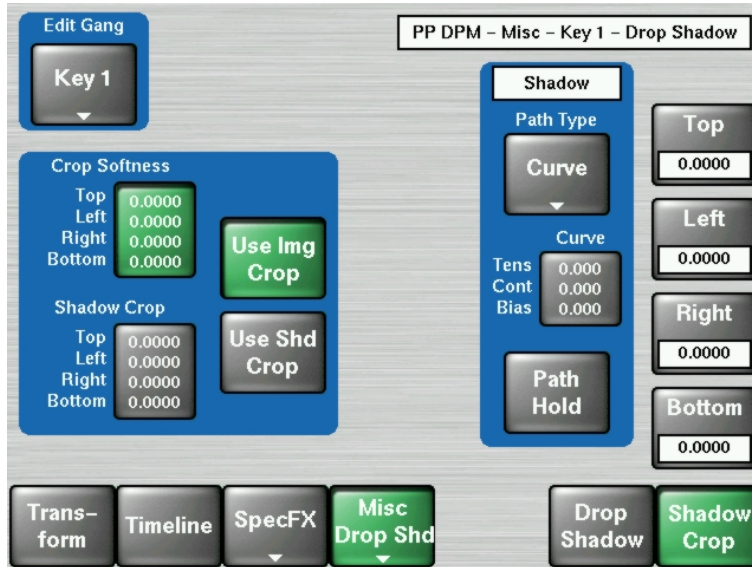


Figure 141 DPM – Misc – Shadow Crop

When **Use Image Crop** is selected, crop values of the shadow match the crop values used for the primary image. Only shadow edge softness controls are active in this mode.

When the **Crop Softness** data pad is selected soft knob controls for shadow edge softness are available (**Top**, **Bottom**, **Left**, and **Right**). The total softness of the drop shadow edges will be the softness of the shadow edge combined with any softness of the primary image.

When **Use Shadow Crop** is selected, the edges of the drop shadow can be given crop values different from the primary image.

5.11.4 Transform Menus

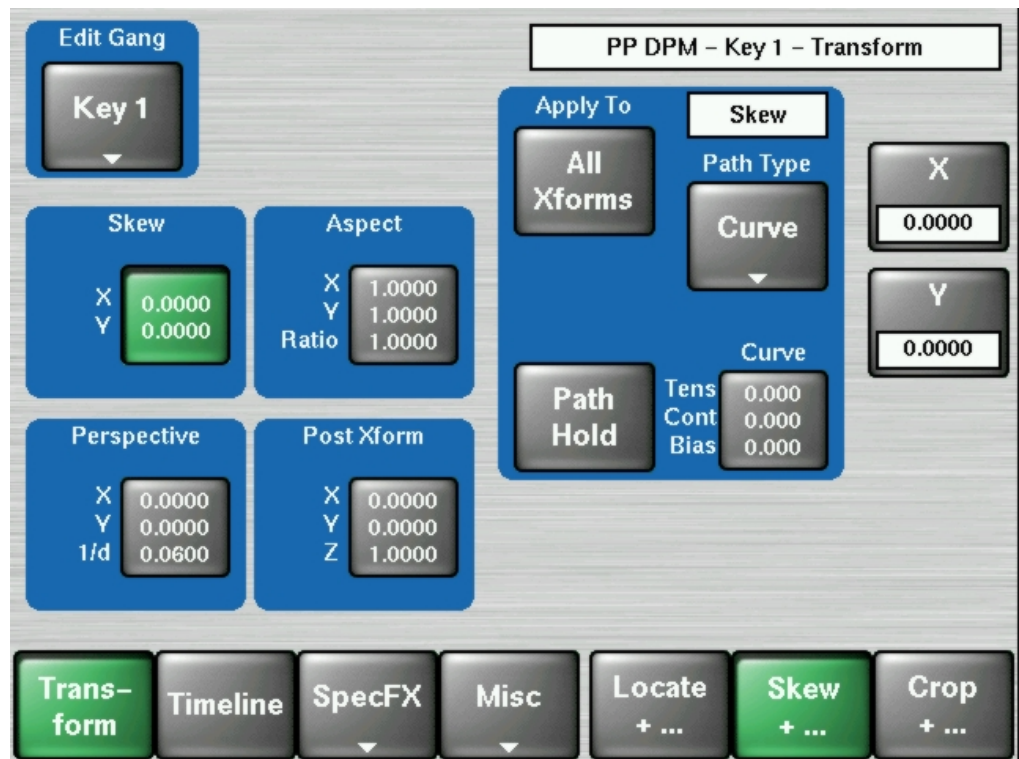


Figure 142 DPM – Key 1 -Transform Menu

All parameter manipulations for the DPM channels are performed in the various transform menus.

The main groups Locate, Skew, and Crop are selected in the bottom right corner of the screen. Inside the main group you can select the subgroup, e.g. Locate, Locate Axis, Target Rot., and Spin by pressing the appropriate button. Per Subgroup you can adjust the parameters for Source and for Target. For more information on this issue see chapter on Concepts.

5.11.4.1 Edit Gang

The Edit Gang button shows you for which channels parameters are adjusted in parallel. If more than one channel is selected, the values of the top channel are displayed.

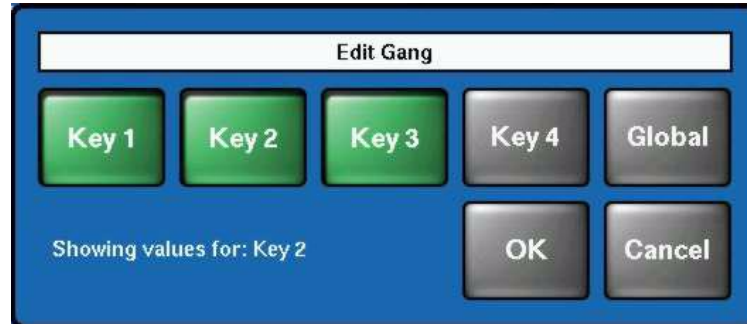


Figure 143 DPM – Edit Gang Selection

You can select all Keyer channels which are included in this effect. The last selected channel is the one which has its values displayed. Selecting the Global channel will deselect the Keyer channels and vice versa.

5.11.4.2 Path Type

The path control section allows you to select different interpolation path types for all or some of the parameters.

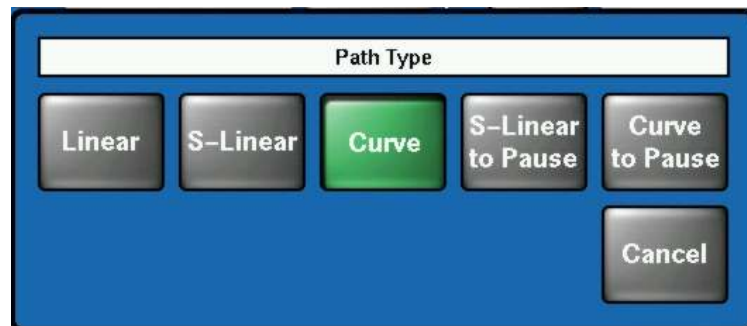


Figure 144 DPM – Path Type Selection

5.11.4.3 X, Y, Z Spin

For the subgroup Spin the path type can be different for the X,Y, and Z spin.

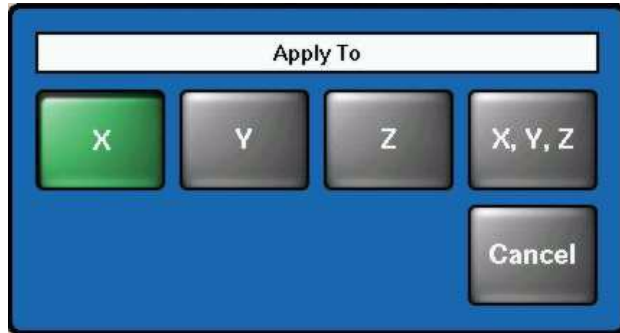


Figure 145 DPM – Spin Selection

To adjust the parameters for Tension, Continuity, and Bias press the relevant button in the path control section.

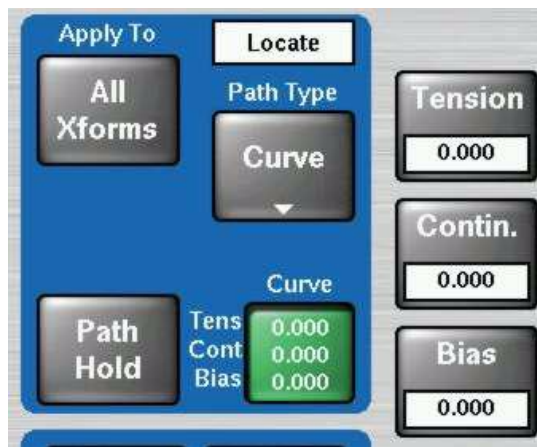


Figure 146 DPM – Adjust Tension, Continuity, and Bias

If Path Hold is selected, there will be no interpolation between the keyframes and the new value will be applied when the next keyframe is reached.

5.11.4.4 Crop

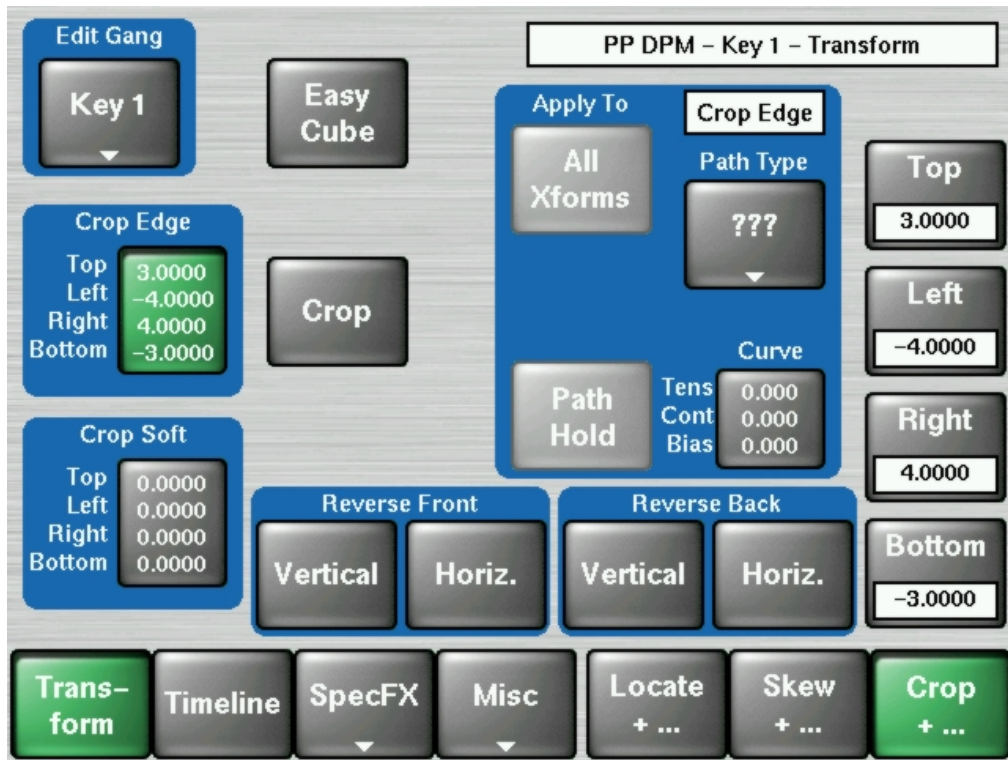


Figure 147 DPM – Key 1 – Transform - Crop

The menu serves to trim the image. In addition the softness of the edges can be adjusted and the image can be mirrored horizontal and vertical with **Reverse Front** and **Reverse Back**. The **Easy Cube** button forces channels built into a 6 sided solid to stay visible only when such an object would display them and also moves the channels automatically to their opposite side as the solid rotates. It does not build a cube automatically.

5.11.5 Timeline Menus

The timeline menus consist of two main groups, Save/Recall and Edit.

5.11.5.1 Save/Recall Menu



Figure 148 DPM – Timeline – Save/Recall Menu

This menu gives you an overview of all 100 registers. You can select any register for recall, edit or modify. The green line indicates the current effect, the blue line is the cursor.

5.11.5.2 Save / Discard

This button is only enabled when you have modified the current effect in the Timeline/Edit menu. Once you have made changes the pop-up menu shown below allows you to either save the changes permanently or discard them. If the Effects section is in control of DPM the question is also asked in the display there. It is answered by pressing "Enter" to save changes and by "Clear" to discard them.

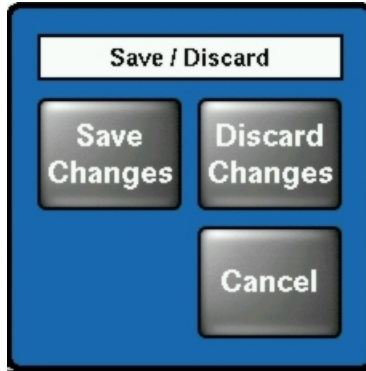


Figure 149 DPM – Timeline – Save/Discard

Since the Timeline/Edit menu always refers to the current effect, there are two ways to start an effect for an empty register:

- Recall an empty register in the menu to select it as the current effect and add keyframes via Insert in the timeline / edit menu.
- Use the Store button in the main control panel to select an empty register by using the "Store Free" dialogue as the current effect and add the first keyframe.

5.11.5.3 Recall

Select a register and press Recall.

This button is disabled when the current effect is modified and the modification is not yet saved or discarded.

5.11.5.4 Modify

The modify button allows you to rename or to delete the selected register.

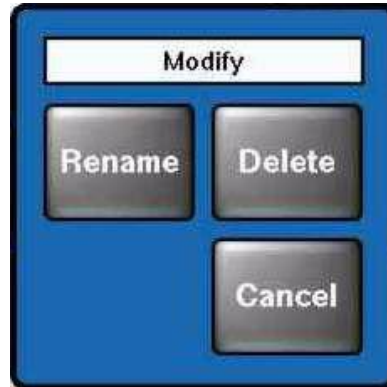


Figure 150 DPM – Timeline – Modify

5.11.5.5 Use Priority

If the **Use Prio.** button is activated, the key priority of the included keyers will be set by the DPM effect on a keyframe by keyframe base. If such a DPM register is recalled by an E-MEM register, any priority information stored in the E-MEM register will be ignored.

5.11.5.6 Use Video Sources

If this function is activated for a keyer, the source selection for the selected keyer will be set by the DPM effect on a keyframe by keyframe base. If such a DPM-register is recalled by an E-MEM-register, the source information for the relevant keyer stored in the E-MEM-register will be ignored.

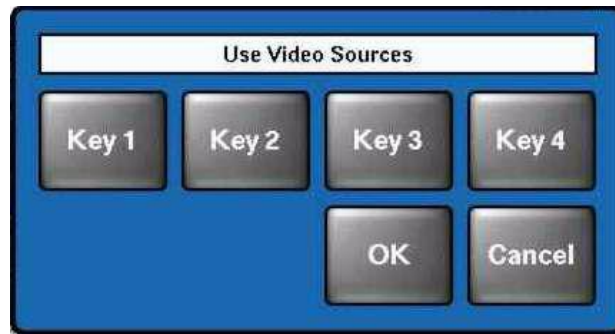


Figure 151 DPM – Timeline – Video Sources

5.11.5.7 Loop

This function allows you to put the selected effect in an endless loop:

Loop: Run from begin to end.
Bounce: Run begin to end, then reverse to begin, etc.

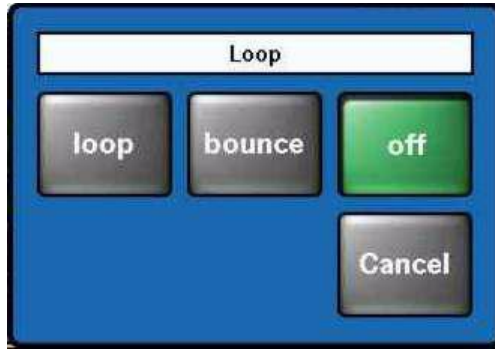


Figure 152 DPM – Timeline – Video Sources

5.11.5.8 Protect

Protects the register against save, delete or rename.

The buttons Modify / Use Priority / Use Video Sources / Loop / Protect are direct permanent changes that do not need confirmation. Using these function does not select the chosen register as the current effect. A current effect is only selected by a Recall in the menu, by the Store and Edit button on the main control panel and by E-MEM recalls.

5.11.6 Show Timeline Menu



Figure 153 DPM – Timeline – Edit Menu

The Edit menu allows you to insert/modify/delete keyframes for the selected channels for the current effect.

5.11.6.1 Delegation

The Delegation button shows you for which channels the actions are executed.



Figure 154 DPM – Timeline – Delegation Selection

You can select all Keyer channels which are included in this effect. The last selected channel is the displayed one.

5.11.6.2 Sure Touch

“Sure Touch” changes the way in which effects behave during recall and playback, providing more control and flexibility. An effect can be safely recalled using two new modes which eliminate abrupt changes: hence the name “sure touch” is being used. When using a Sure Touch mode, the effect adapts itself to the switcher’s current state. Upon recall of any effect, no changes are made to the current state, regardless of the nature or the composition of the effect. Then, when the effect is run, the relative changes from the interpolated effect are applied instead of the traditional absolute output. Only elements which changed over the course of the original effect are affected.

One way of thinking about safe touch is to think of it as running an effect in “relative” mode.

These changes can be applied in different ways, allowing the effect to interpolate on a path parallel to the original effect (**Parallel** mode), or on a path that converges the changing state smoothly to the actual end state of the original effect (**Converge** mode). A safe touch mode can be “forced on” just prior to recalling an effect, or it can be saved with the effect to be used automatically.

This feature changes the paradigm of control for effects, allowing effects to be applied under more flexible set of conditions and also to be used as specialized functions to perform specific actions.

Within the DPM timeline system, when an effect is first created, a snapshot of all values is saved. For any subsequent keyframes, only values which have changed are then saved. Those values that have changed are referred to as “bound elements” and are subject to interpolation as the effect runs.

When an effect is recalled in a sure touch mode, the current states of the bound elements are read by the timeline system. These values are compared with the original first keyframe (snapshot) of the effect, and an “offset” or “new zero” is established for each bound element of the effect. This “offset” is then applied during all subsequent fields of the effect. A new “offset” is established each time the effect is recalled. The result is that a “new effect” is established each time the effect is recalled.

The essential result is this: When an effect is recalled in a safe touch mode, only those values which underwent changes after the first key-frame of the original effect are touched, and only changes in values are applied.

5.11.6.3 Cursor Control

The top row buttons **Go To**, **Begin**, **Rev Play**, **Pause**, **Play**, and **End** let you run the current effect or position the cursor to a specific keyframe. The effect position can also be adjusted by the **Eff. Pos.** digipot.

5.11.6.4 Direct Mode

The Direct Mode button in the bottom row switches between a fast mode, accessing directly the most common functions, and a more detailed mode.



Figure 155 DPM – Timeline – Direct Mode Buttons

When Direct Mode is switched off, the direct edit buttons change into popup buttons:



Figure 156 DPM – Timeline – Popup Buttons

5.11.6.5 Modify Keyframe

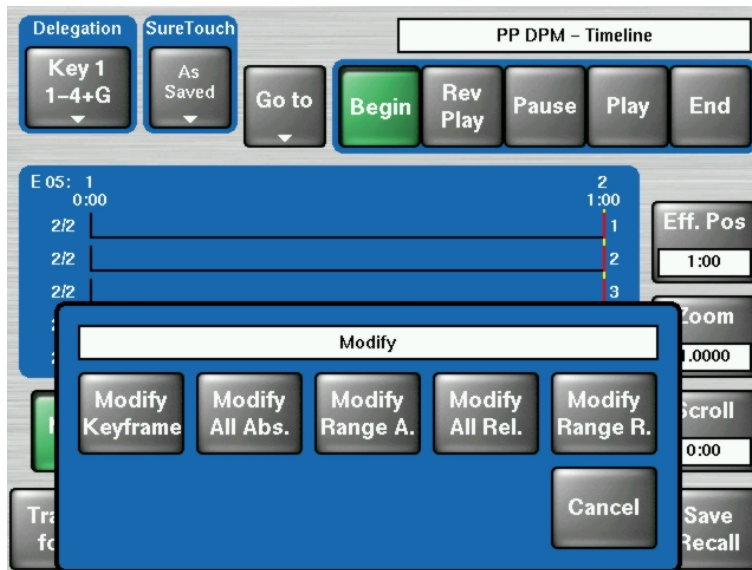


Figure 157 DPM – Timeline – Modify Keyframe

NOTE!

When the cursor is at a keyframe, the parameters of this keyframe will be modified to the current values, When the cursor is between keyframes, modify inserts a keyframe at the current position without adding any time. Modify All applies current keyframe changes to all keyframes.

5.11.6.6 Insert

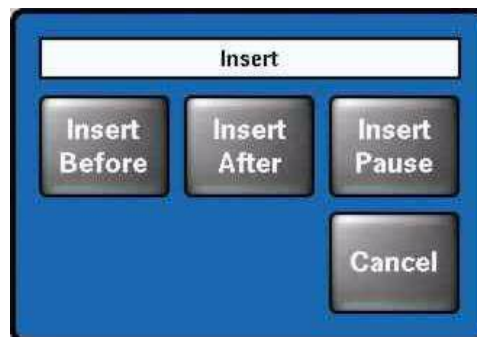


Figure 158 DPM – Timeline – Insert Buttons

NOTE!

When the cursor is at a keyframe, a new keyframe will be inserted, adding the time which is specified with Keyframe Duration, When the cursor is between keyframes, the keyframe is inserted at the current position without adding any time.

5.11.6.7 Delete Keyframe

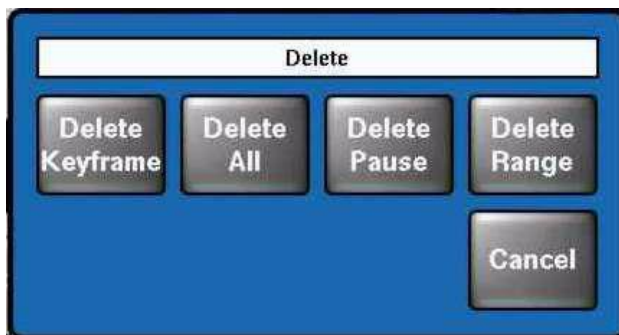


Figure 159 DPM – Timeline – Delete Buttons

NOTE!

When deleting a keyframe its duration is also deleted causing effect duration to change.

5.11.6.8 Keyframe Duration

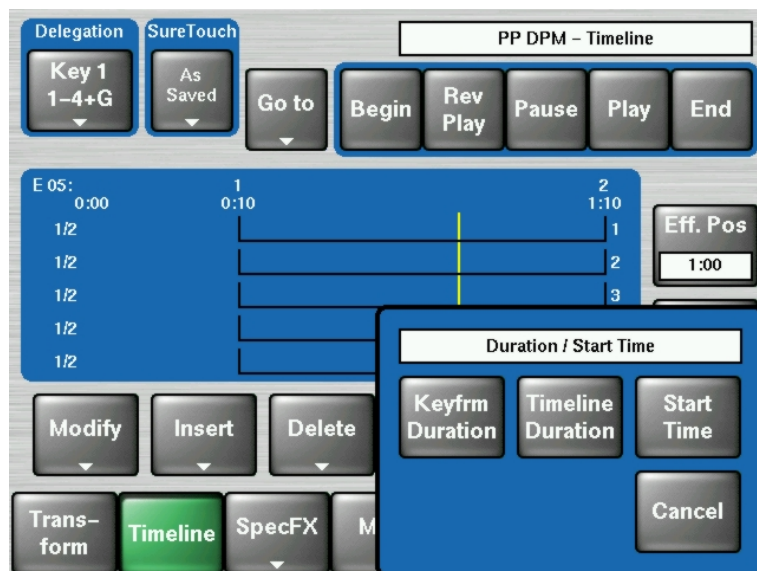


Figure 160 DPM – Timeline – Duration / Start Time Buttons

NOTE!

The Keyframe Duration button is NOT used to change the keyframe duration of the current keyframe. The time is used for the insert of a new keyframe when inserted while the cursor is on a keyframe (see Insert Keyframe).

5.11.6.9 Constant Duration

The function of this button is the same in both modes. If selected, inserting or deleting will not change the total duration of the effect. Inserting a keyframe while the cursor is at a keyframe position, the new keyframe will add the time specified by Keyframe Duration, but the total effect duration will be rescaled to keep it at the previous duration. When a keyframe is deleted, its keyframe duration will be added to the previous keyframe.

5.11.7 SpecFX Kurl Menu

The Kurl effects are grouped into modes, each of which has its own set of menu panes and related soft knob controls.

The Kurl modes are:

- Page Turn
- Page Roll.
- Position/Size Modulation,
- Slits

A Digital Picture Manipulator can apply only one set of Kurl mode parameters at a time. If you wish to use more than one mode of Kurl effects simultaneously on the same video (for example, size modulation of an effect), use multiple Digital Picture Manipulators with re-entry.

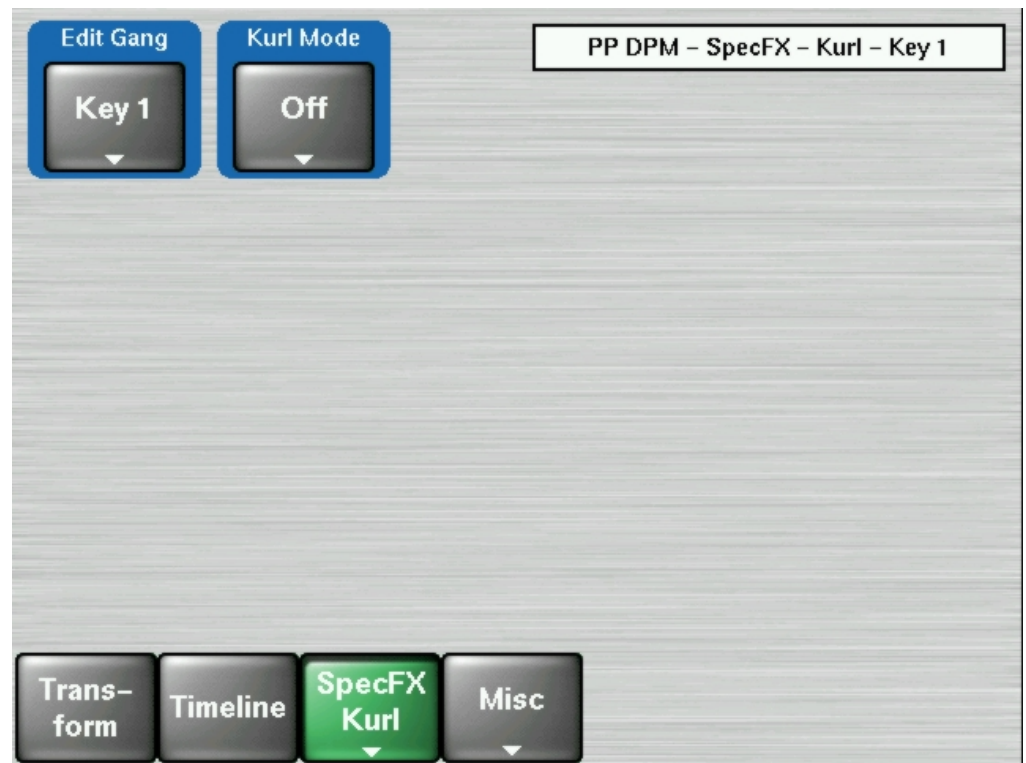


Figure 161 DPM – SpecFx – Kurl Menu (Off)

5.11.7.1 Selecting the Kurl Mode

The Kurl Mode button allows you to select different operating modes.

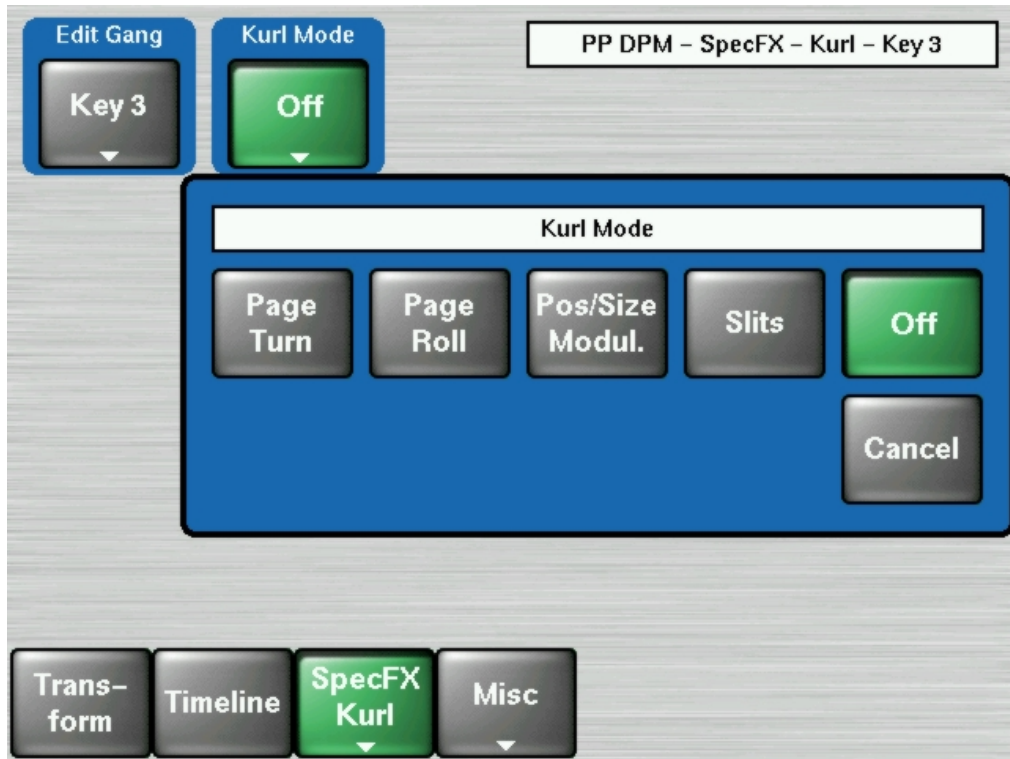


Figure 162 DPM – SpecFx – Kurl Mode Selection

5.11.7.2 Page Turn / Roll Mode

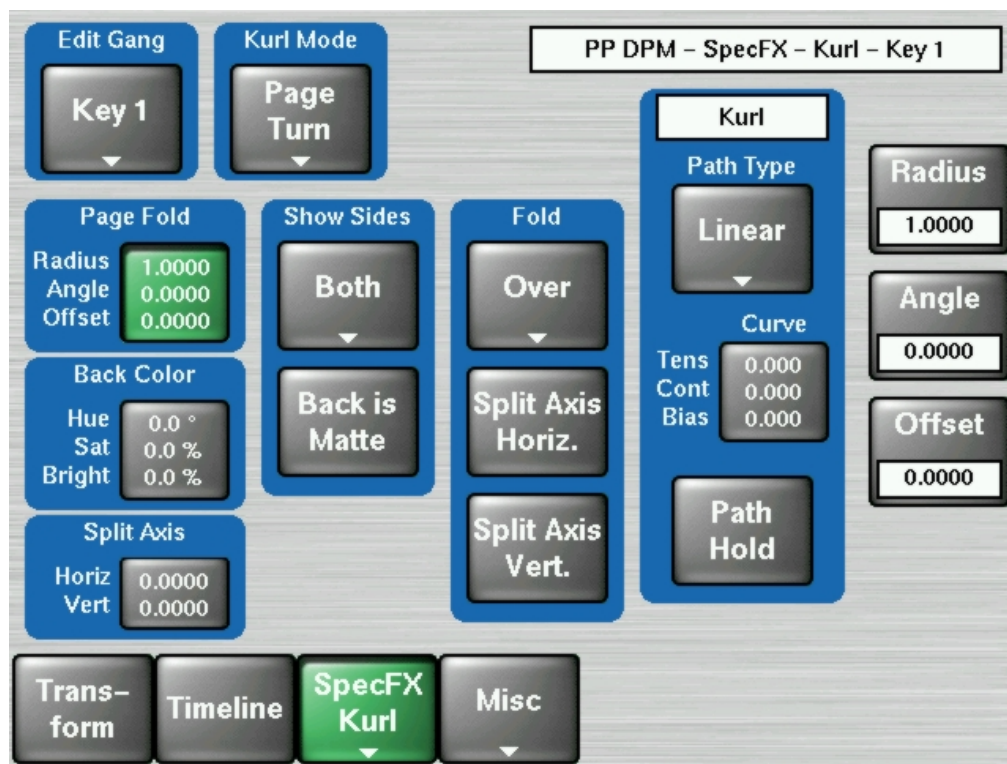


Figure 163 DPM – SpecFx – Kurl Menu (Page Turn Mode)

Page Turn is a transition effect with the video being mapped to an original plane, a cylinder, and a final plane parallel to the original plane. Page Roll maps the video to an original plane and a cylinder. Page Turn and Roll are parallel projections to the target screen with no perspective.

NOTE!

For a Page Turn effect on a key or video that is not a full raster, you will need to set up two identical keys and use the Show Sides Front and Back buttons to define the position of each key.

Touch the Page Turn/Roll Kurl Mode button to access the Page Turn and Roll controls

Fold Pane:

The orientation of the fold (**Over** or **Under** the original plane) are selected in the **Fold** pane.

Split page turn and roll effects are controlled with the **Split Axis** buttons. The effect can be split Horiz, or Vert, or both ways using the labeled buttons. Selecting the **Split Axis** buttons brings up **Horiz** and **Vert** soft knobs that control the location of the split.

Page Fold:

When the **Page Fold** data pad is selected, the following soft knob controls are available:

- **Radius**
Adjusts the radius of the page turn cylinder affecting the sharpness of the curl.
- **Angle**
Defines the orientation of the page turn cylinder with respect to the source X and Y axes, and specifies the direction of the turn.
- **Offset**
Positions the page turn cylinder with respect to the source plane and, when interpolated between keyframes, causes the page to turn. The offset would typically change from one edge or corner of the source raster to the opposite edge or corner for the turn. (Hint: Offset = 0 will put the turn at the middle of the screen.)

Show Sides Pane:

Choices of what sides of the effect to display (**Both**, **Front**, **Back**) are available in the **Show Sides** pane. Selecting only a portion of the effect can be used for multi-pass effect creation.

When Back is Matte is selected, the back of the effect will be a matte color. The color of the matte can be changed by touching the Back Color data pad to bring up soft knob controls for **Hue**, **Saturation**, and **Brightness**.

5.11.7.3 Pos / Size Mode

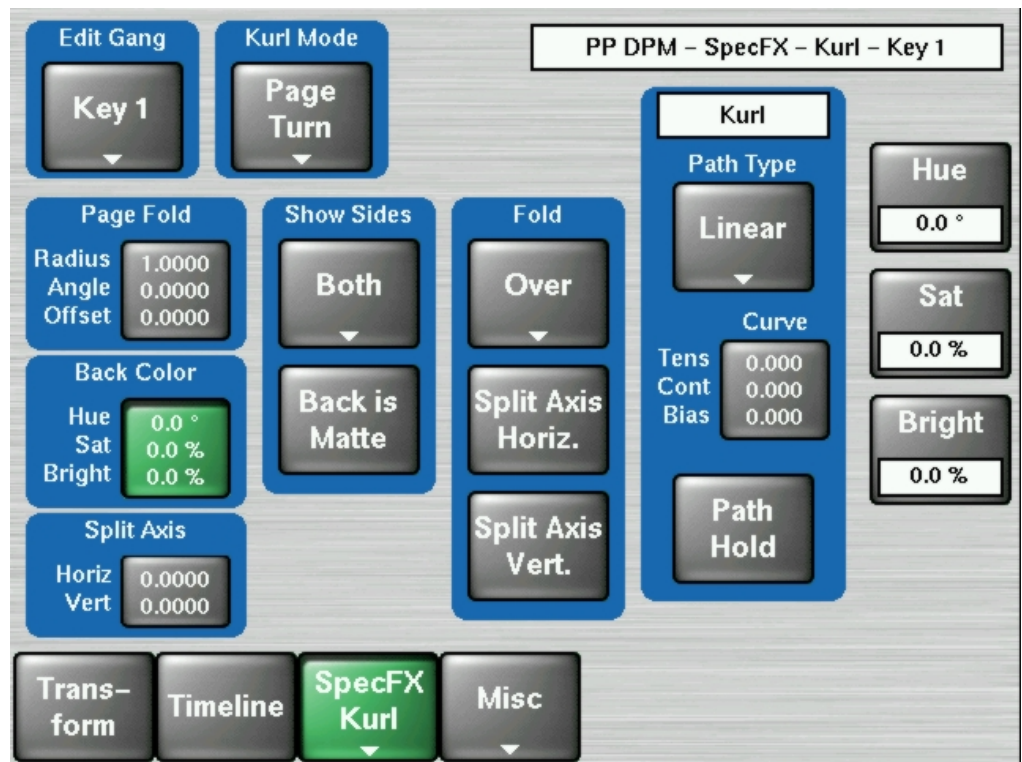


Figure 164 DPM – SpecFx – Kurl Menu (Pos/Size Mode)

Position and Size Modulation are effects in which the source video is position- or size-modulated through an additive process with either a single wave train, or two wave trains with the second wave at a right angle to the first. Each of the two wave trains (horizontal, vertical) may be selected independently from a set of modulation patterns.

Touch the **Pos/Size Modul.** Kurl Mode button to access the position and size modulation controls.

Horizontal or Vertical (Modulation) Pane:

In the Modulation pane you select the wave train axis (**Horizontal** or **Vertical**) for which the rest of the menu controls will apply. The following Soft knob controls appear on the right for the selected axis:

- **Amplitude**
Defines the modulation amplitude (the height of the pattern waves).
- **Frequency**
Defines the modulation frequency and therefore the number of pattern cycles that appear across the source.

- **Phase**

When **Phase Lock** is on, the **Phase** soft knob is available to control the static location of the phase of the pattern.

When **Phase Lock** is off, the **Speed** soft knob is available to adjust the speed of the pattern's motion. Negative values can be entered to reverse the direction of the motion.

When data pad **CenterX, CenterY, Axis** is selected soft knob controls for **CenterX, CenterY and Angle** are available to define the angle and position.

Horiz. or Vertical Mode Pane:

With an axis selected, you select the type of modulation to be applied to that axis (**Off, Pos, Size or Cancel**) in the Mode Type pane.

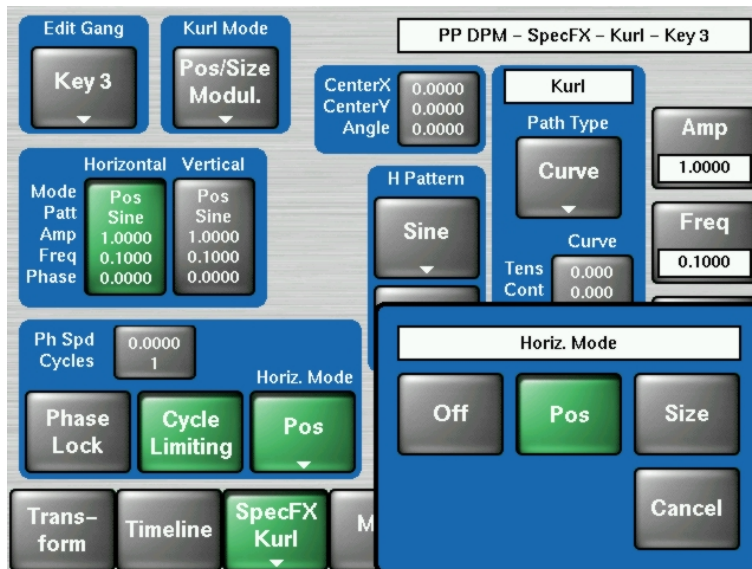


Figure 165 DPM – SpecFx – Kurl Menu (Horiz. Mode Selection)

When the **Vertical** axis is selected, you can choose to have that axis' modulation values match the horizontal values with the **V Mode follow H** button.

When **Size** is selected in the Mod Type pane, the CenterX/Y/Angle data pad in the is active. When this data pad is selected soft knob controls for **CenterX, CenterY, and Angle** are available

Pattern Pane:

The type of wave pattern to be applied to the selected axis and modulation type is selected in the Pattern pane.

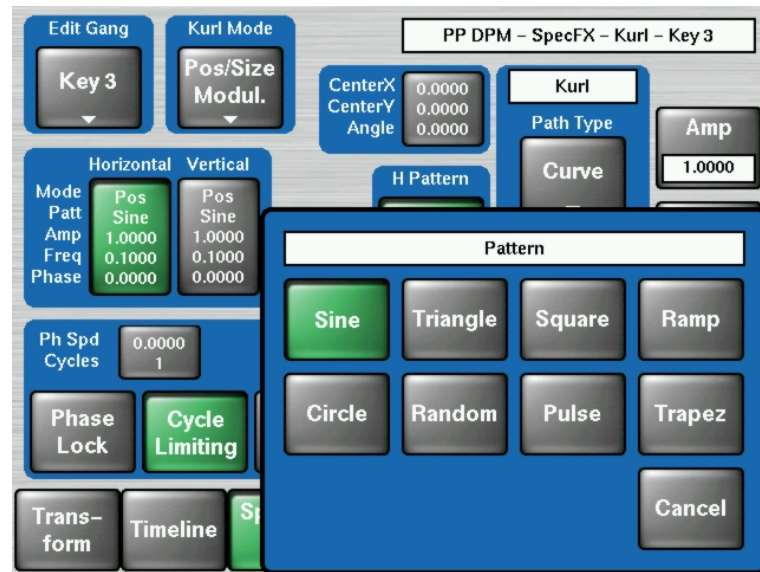


Figure 166 DPM - SpecFx - Kurl Menu (Pattern Selection)

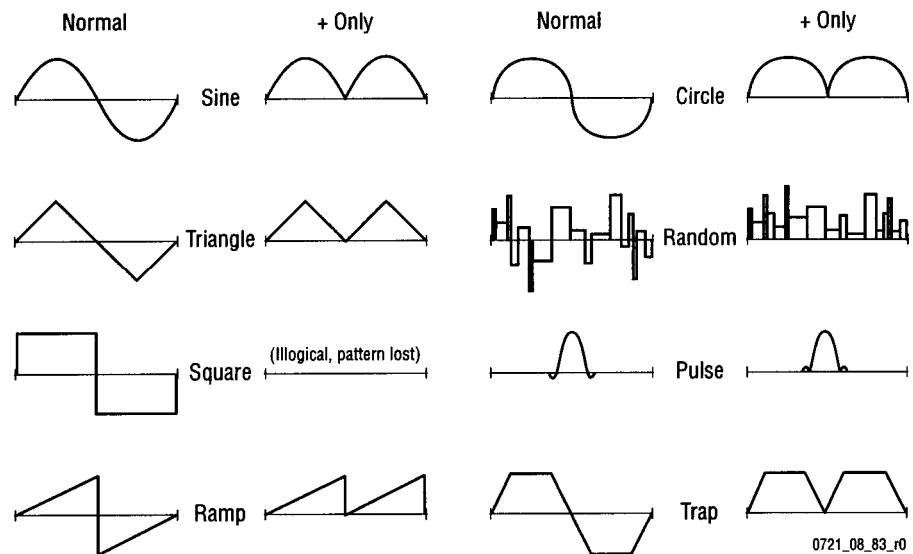


Figure 167 Available Wave Patterns

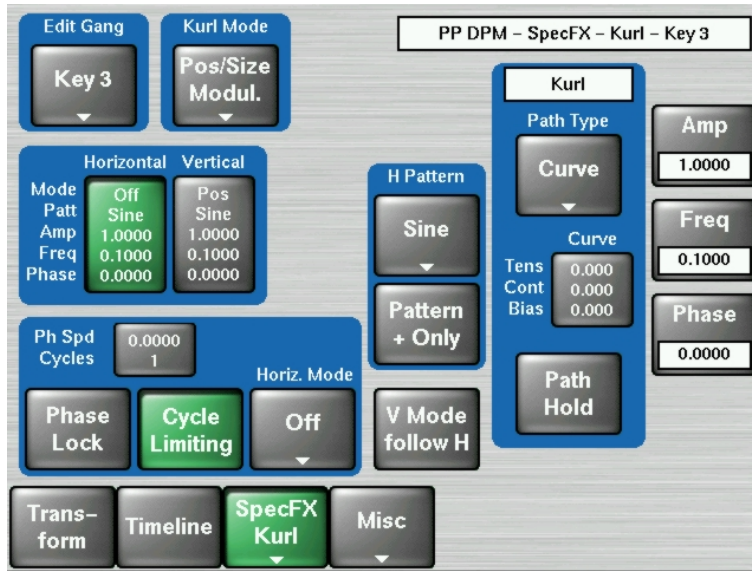


Figure 168 DPM – SpecFx – Kurl Menu (Pos/Size Mode)

- **Cycle Limiting**
The Button activates the Cycles soft knob. This control can be used to limit the number of wave pattern cycles visible.
- **Pattern + Only**
The Button acts like a rectifier and converts all wave excursions to positive. Representative resulting wave shapes are shown in Figure 167 Available Wave Patterns.

5.11.7.4 Slits Mode

Slits is an effect in which the source video is split into a number of parallel slits. The width of the slits may be uniform or random, and an angle may be specified. An offset function is provided which controls the amount of displacement of alternating slits in opposite directions (to cause a transition type effect).

Touch the **Slits Kurl Mode** button to access the slits controls. When the **Modulation** data pad is selected the following menu appears.

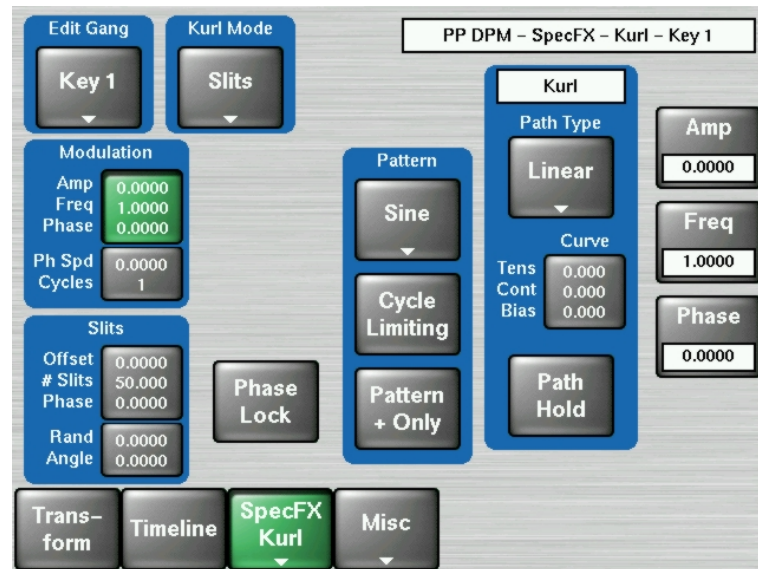


Figure 169 DPM – SpecFx – Kurl Menu (Slits Mode)

The Slit modulation soft knob controls and wave patterns are the same as Position/Size mode specified in section 5.11.7.3

When the **Slits** data pad is selected a menu similar to Figure 180 appears.

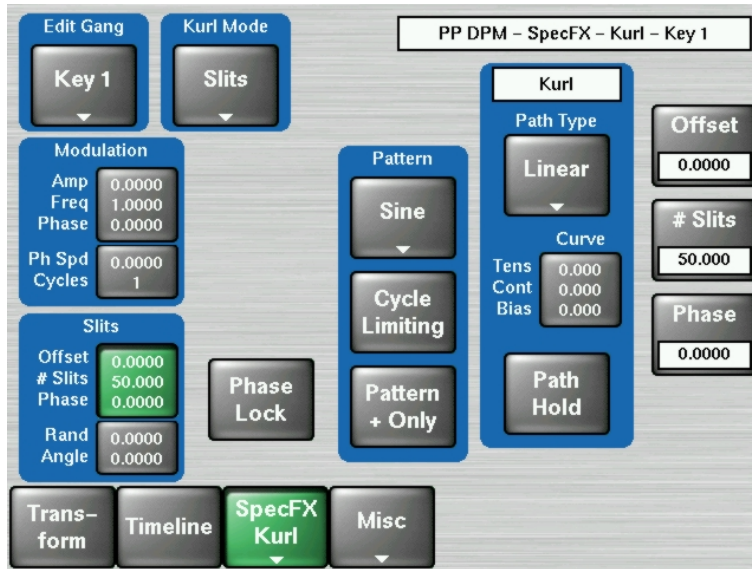


Figure 170 DPM – SpecFx – Kurl Menu (Slits Mode)

Soft knob controls are provided to control the following attributes of the slits:

- **Offset**
Sets the distance adjoining slits move away from each other. This can be used for transition effects, using a zero offset for the first keyframe and an off-the-screen offset for the last keyframe.
- **# Slits**
Defines the number of slits.
- **Phase**
Determines the starting point or phase of the modulation for the center point.
- **Random**
Defines the degree of randomization of slit width.
- **Angle**
Defines the angle of the slits with respect to the source X and Y axes.

5.11.8 Misc Menu

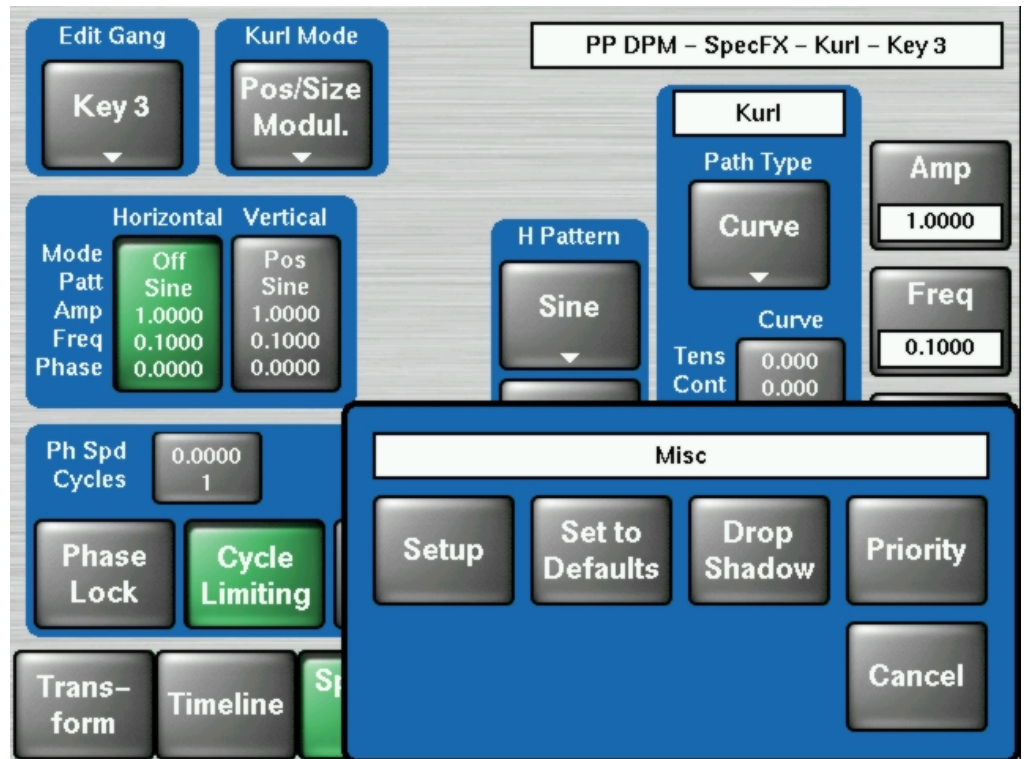


Figure 171 DPM - Kurl Mode - Misc Selection

5.11.8.1 Setup

Select the included keyer and allow global control.

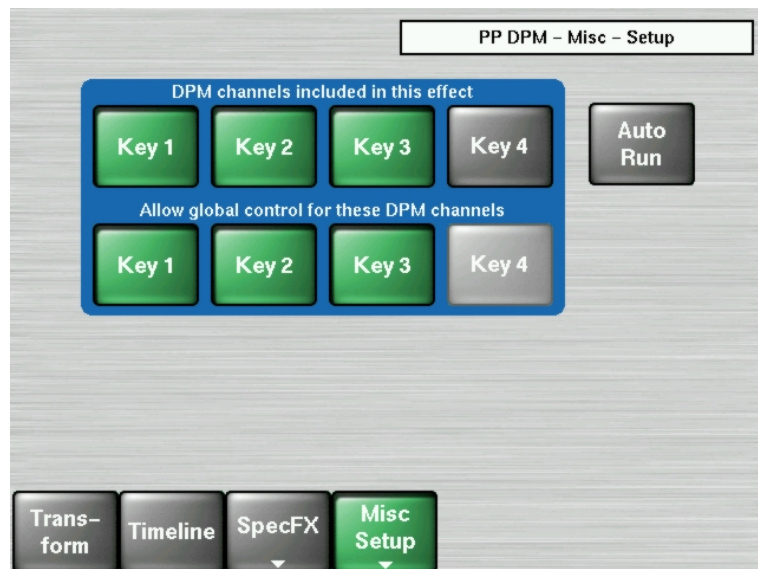


Figure 172 DPM - Misc Setup

5.11.8.2 Set to Defaults

To reset all Digital Picture Manipulator parameters or groups of them to default you can use the Set to Defaults menu which is accessible through the Misc selection in the button row.

To reset only geometric parameters, i.e. those which affect position, size etc., use the "Geom. Parm's" reset. The "All Parm's" reset sets everything, including matte colors, drops shadows, mirrors and Kurl values to default.

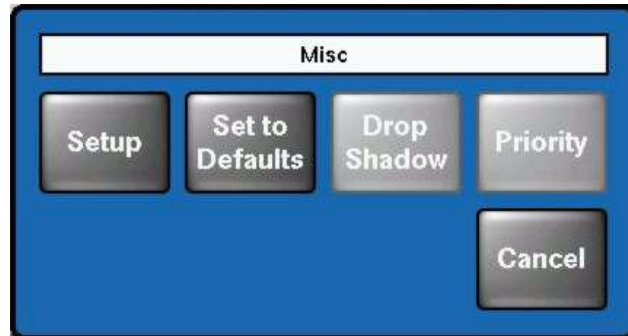


Figure 173 DPM – Set to Default



Figure 174 DPM – Default Selection

5.11.8.3 Drop Shadow

The Drop Shadow feature is turned on with the Drop Shadow button. When turned on, soft knob controls become available on the right. Different soft knob controls appear, depending on which data pad has been selected in that pane. The current parameter names and values are displayed on each data pad. For more details refer to section 5.11.3.

5.11.8.4 Priority

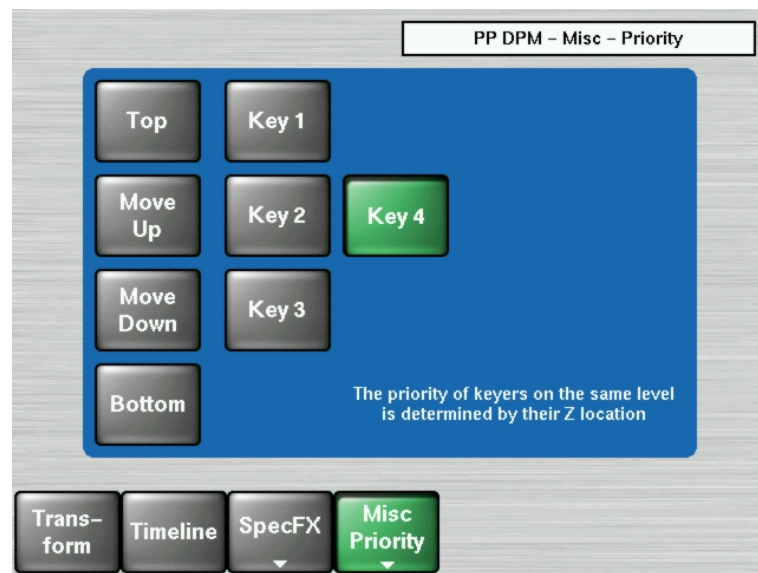


Figure 175 DPM – Timeline – Modify

5.11.9 Digital Effects Library

5.11.9.1 What is it? How do I Use it?

This DPM effect library is provided to give users examples of the capabilities of the internal DPM as well as a starting point to create own effects.

The library is in 2 sections:

- **C1fx** is the section which uses only DPM channel 1 on P-P and ME1. This section uses 3D-planar transformations and can be easily used by owners of systems which do not have 4 DPM channels per M/E.
- **C4fx** is the section which uses up to 4 DPM channels per effect and uses the SpecFX: Kurl™ and Splits/Mirrors effects. This section will only show results for owners of fully loaded KayakDD™ switchers.

Each effect is built in 2 parts: 1 to introduce a picture and the 2nd to remove the picture. This enables users to work live with the DPM recall area of the KayakDD™ and also to integrate effects easily into E-MEM™ timelines.

- All effects were built using V664.2 software.
The effects will not replay correctly, if at all, using earlier software versions.
- The effects were built for 4:3 aspect ratio.
- The effects can be used in 625/50 and 525/60 standard.

5.11.9.2 Configuration Notes for DPM

In the **Config / Ebox-DPM** settings area of your switcher are very important settings which affect the edges of pictures in DPM channels. If you use sources which have been digitally sourced you should ensure that the production crop settings for 4:3 are set to Top = 3.05, Left = -4.16, Right = 4.16, Bottom = -3.05. These figures will ensure the correct viewing of the effects in this package.

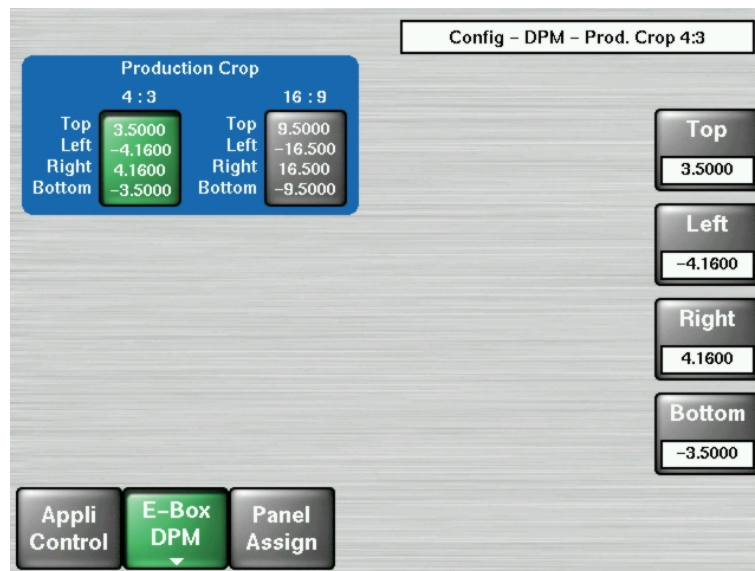


Figure 176 Config - DPM – Timeline – Modify

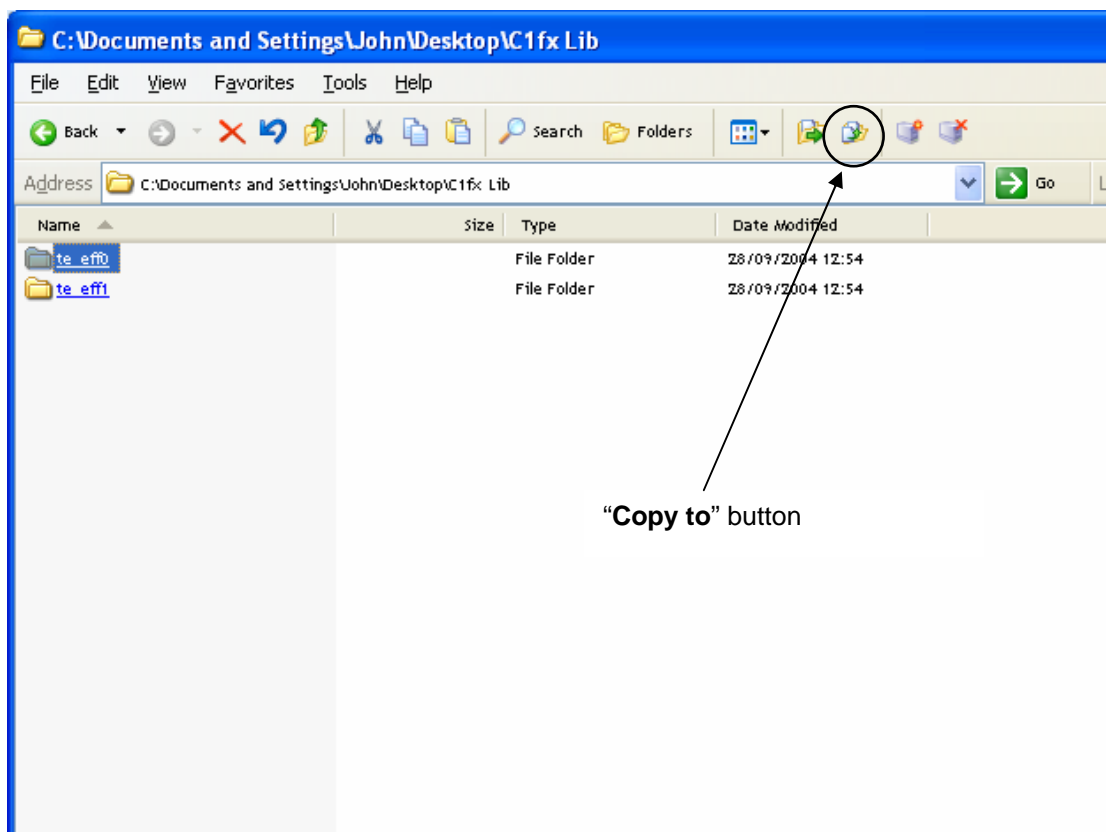
5.11.9.3 How to Load the Effects to Your Switcher

Use the memory stick for your system to make a copy of your working application.

- Insert your stick in USB slot 2 or 4.
- Go to the CONFIG menu. It will open in Application Control window
- Press SAVE – your application will be saved to the stick
- Press SAVE AS and give your application a new name, this could include the letters FX.
- You now have 2 copies of your working application. The first is a working backup, the second will become your copy with an effects library

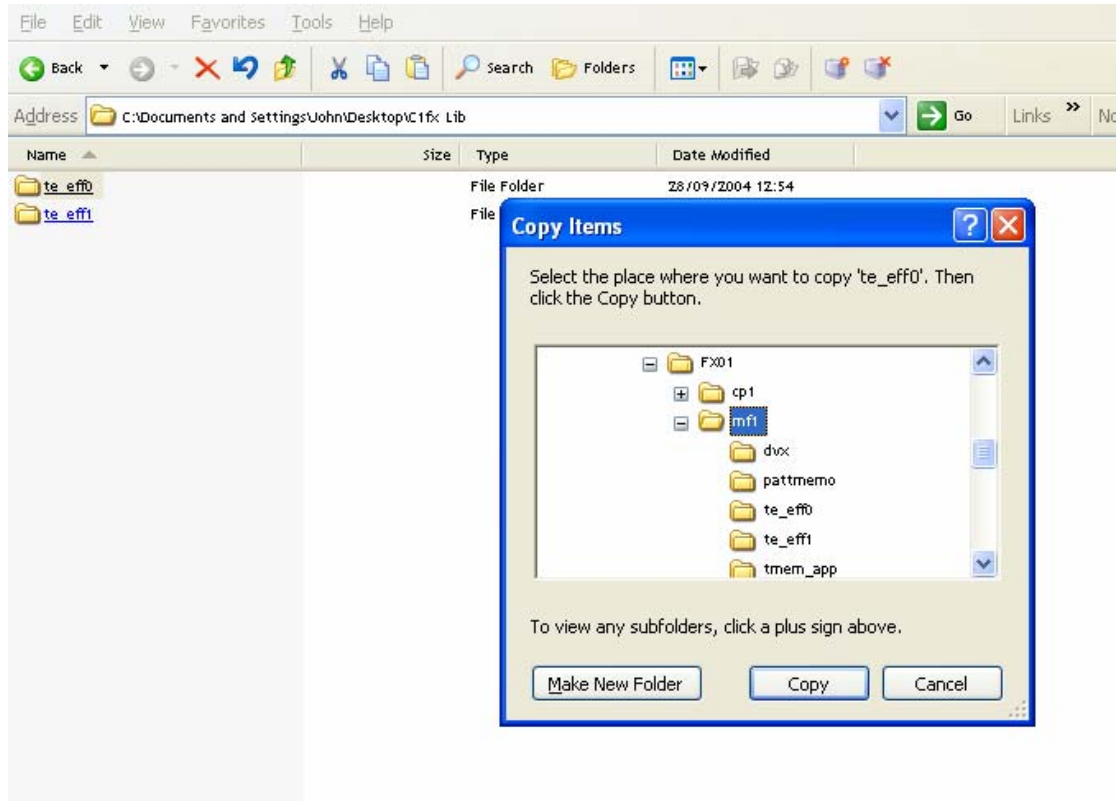
Use your PC to add the effects library to your 2nd application copy.

- Connect your USB memory stick to your PC
- Using windows explorer to navigate to the folder on your computer that contains the effects libraries. There are 2 folders; 1 is called C1fx, the other is called C4fx. In these are folders named te_eff0 and te_eff1. Highlight 1 of these folders and press the “copy to” button in the windows tool bar.



- In the window that opens navigate to your memory stick and open the “appli” folder. In this navigate to the folder named as you named your copy of the active application on your KayakDD™ and then to the MF1 folder.

With this folder highlighted press OK. Windows will ask you to confirm that the existing **te_eff0** or **te_eff1** folder may be overwritten as all data within it will be replaced with the library effects. If you are happy that you have highlighted the correct application answer “**yes**”.



You do not have to copy both **te_eff0** and **te_eff1** to a 2 M/E KayakDD™ unless you want both mix effect banks to have access to the effect library.

You do not have to copy the same library (**C1fx** or **C4fx**), so you could use **C1fx** from **te_eff0** and **C4fx** from **te_eff1**.

If you have a KayakDD™ 1 M/E unit the **te_eff1** folder exists, but this is a folder made for compatibility only. If you save effects to this folder it will be emptied when the KayakDD™ saves the application.

In the package of software you will find a folder named “**ramrecStills**”. This folder contains 4 files which are full frame graphics that you can use to name the 4 keyers on an M/E using RamRecorder. You will have to use a PC running the sidepanel program to transfer these pictures to your KayakDD™ and full instructions on how to use the ram recorder transfer system are in this KayakDD™ user manual.

To replay and use an effect refer to the section **Catalogue of Effects** below.

5.11.10 Catalog of Effects

5.11.10.1 C1fx – for Channel 1 Only.

Naming:

- sl = slide
- ps = perspective slide
- lb = linear motion bounce
- spir = spiral
- bnc = multi position bounce
- sw = swoop
- bri = barrel roll in
- bro = barrel roll out

Positions in or out of frame:

- T = Top Centre
- B = Bottom Centre
- L = Left Centre
- R = Right Centre
- TL = Top Left corner
- TR = Top Right corner
- BL = Bottom Left corner
- BR = Bottom Right corner
- C = Fully centred

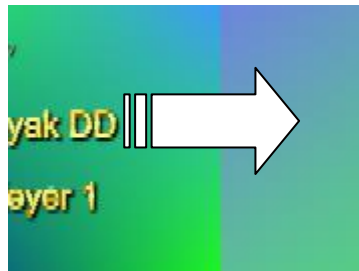
Channel names: C1, C2, C3, C4 = Channel numbers.

All effects in the C1fx section may be used with either full frame pictures or keyed elements.

Bank 00: Slide and zoom with shadows. Effects are 1:00 seconds in duration.

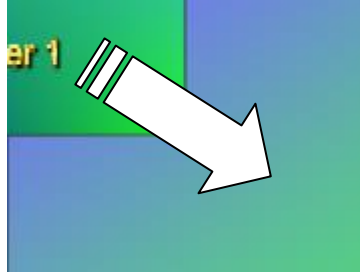
Zoom OUT

- C1sl-LC
- C1sl-RC
- C1sl-TC
- C1sl-BC
- C1sl-CL
- C1sl-CR
- C1sl-CT
- C1sl-CB



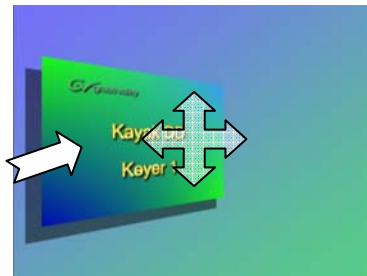
Bank 01: Corner slides and spin zooms with shadows. Effects are 1.00

SpinZoom Out
C1sl-TLC
C1sl-TRC
C1sl-BLC
C1sl-BRC
SpinZoom IN
C1sl-CTL
C1sl-CTR
C1sl-CBL
C1sl-CBR



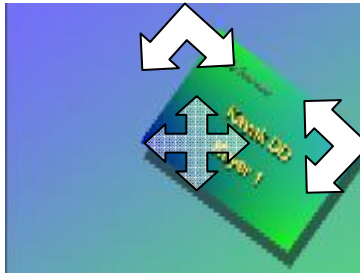
Bank 02: Perspective slides and spiral zooms

C1spir-OUT
C1ps-LC
C1ps-RC
C1ps-TC
C1ps-BC
C1spir-IN
C1ps-CL
C1ps-CR
C1ps-CT
C1ps-CB



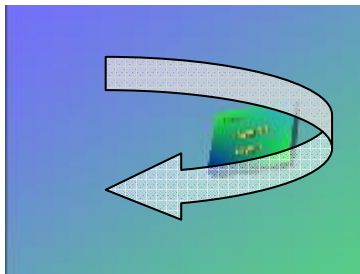
Bank 03: Linear Bounce

C1bncOUT
C1lb-LC
C1lb-RC
C1lb-TC
C1lb-BC
C1bncIN
C1lb-CL
C1lb-CR
C1lb-CT
C1lb-CB



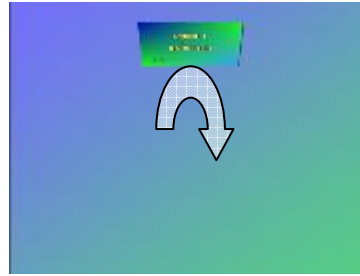
Bank 04: Swoop IN/OUT

C1sw-OUT
C1sw-TLC
C1sw-TRC
C1sw-BLC
C1sw-BRC
C1sw-IN
C1sw-CTL
C1sw-CTR
C1sw-CBT
C1sw-CBR



Bank 05: Barrel Rolls

C1-OUT
C1bri-L
C1bri-R
C1bri-T
C1bri-B
C1-IN
C1bro-L
C1bro-R
C1bro-T
C1bro-B



5.11.10.2 C4fx for KayakDD™ System with 4 DPM Channels per M/E and Advanced Effects Option

Bank 00: Push on/off

QUAD-ON	Brings all 4 channels in from corners
C12sl-LR	Slides C1 off screen, slides C2 on screen
C12sl-RL	Slides C1 off screen, slides C2 on screen
C12sl-TB	Slides C1 off screen, slides C2 on screen
C12sl-BT	Slides C1 off screen, slides C2 on screen
QUAD-OFF	Removes all 4 channels to corners
C21sl-LR	Slides C2 off screen, slides C1 on screen
C21sl-RL	Slides C2 off screen, slides C1 on screen
C21sl-TB	Slides C2 off screen, slides C1 on screen
C21sl-BT	Slides C2 off screen, slides C1 on screen

Bank 10: Reduced size effects (over shoulder position)

Wipe12sq	Square wipe reveals 2 over 1
Wipe21sq	Square wipe removes 2 from 1
Wipe21LR	Wipes 1 from 1
Wipe12LR	Wipes 2 over 2
pgt12	Page turn adds 2
pgt21	Page turn removes 2
pgr12	Page roll adds 2
pgr21	Page roll removes 2

Bank 20: Page Turns full size

K12pg-ON	Double sided page turn 2sec.
C1pgt-ON	
C2pgt-ON	
C3pgt-ON	
C4pgt-ON	
C1pgt-OFF	
C2pgt-OFF	
C3pgt-OFF	
C4pgt-OFF	
K12pg-OFF	

Bank 30: Page Rolls full size

C1pgr-ON
C2pgr-ON
C3pgr-ON
C4pgr-ON
C1pgr-OFF
C2pgr-OFF
C3pgr-OFF
C4pgr-OFF

Bank 40: Double sided page turns and page rolls

C12pgt-ON	All effects are 2 seconds
C34pgt-ON	
C12pgt-OFF	Key 1 is front, K2 back
C34pgt-OFF	Key 3 is front, K4 back.
C12pgr-ON	
C34pgr-ON	May be used with keyable
C12pgr-OFF	sources. Make K1 and K2 the
C34pgr-OFF	same or K3 and K4 the same.

Bank 50: Cubes and Slabs

smlcub	Small cube, centre screen rotates 3 times. 8s.
smlslb	Small slab, centre screen rotates 3 times. 8s.
CUB-R12	Full size cube. C2 replaces C1- rotate to see C3 top
CUB-R21	Full size cube. C1 replaces C2- rotate to see C3 top
SLB-TLC	6 sided slab fly
SLB-TRC	
SLB-CTL	
SLB-CTR	
SLB-IN	6 sided slab fly/rotate from centre
SLB-OUT	reverse

Bank 60: Tiles and modulation

C1twinH
C1twinV
C1quad
C12twin
C1mod
C1expld
C1slitsON
C1slitsOFF

5.11.10.3 Notes

5.11.10.3.1 Use of GLOBAL Channel

Although GLOBAL channel is supported, certain aspects may behave unintuitive. Most of the effects in these libraries do not use GLOBAL, but cubes and push/pull effects do. You may find that when you first load the effects library some effects are not running as intended. Before running any effects go to the menu **DPM – Misc - Reset to Defaults** and reset **ALL PARAMS**.

If some effects still run incorrect, be confident that there will be a software update shortly. It may be that another version of effects library will be required at that time.

5.11.10.3.2 Format

All effects in this library are built for 4:3 aspect ratio.

5.11.10.3.3 Standard

The effects in this library are built in 625/50 standard. The effects durations are stored internally in a format that allows the system to recalculate the duration for 525/60 standard. Effectively that means that effects do not need to be re-built for use in 525/60 standard.

5.12 RAM Recorder Menus

You access the RAM Recorder menu via the Home Menu.

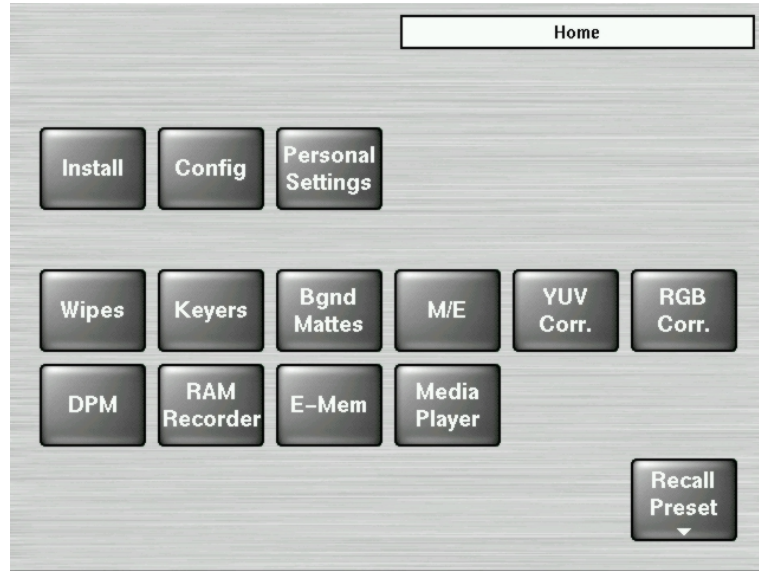


Figure 177 Home Menu

The RAM Recorder is a solid state video server with 4 input/output channels. This means that all stills and clips are stored within a common data pool and may be accessed by all 4 output channels.

For a 1 ME switcher the total amount of storage is 16 seconds. In current software this is segmented for 100 stills and 12 seconds of clip video. (In 50Hz).

For a 2 ME switcher the total storage is 32 seconds, segmented as 100 stills and 28 seconds of clip video. (In 50Hz).

NOTE!

KayakDD RAM Recorder reserves 4 seconds for Stills that only 12 seconds live video is available!

5.12.1 **Stills Menu**

The Stills menu allows the user to store or load stills using the delegated channels.

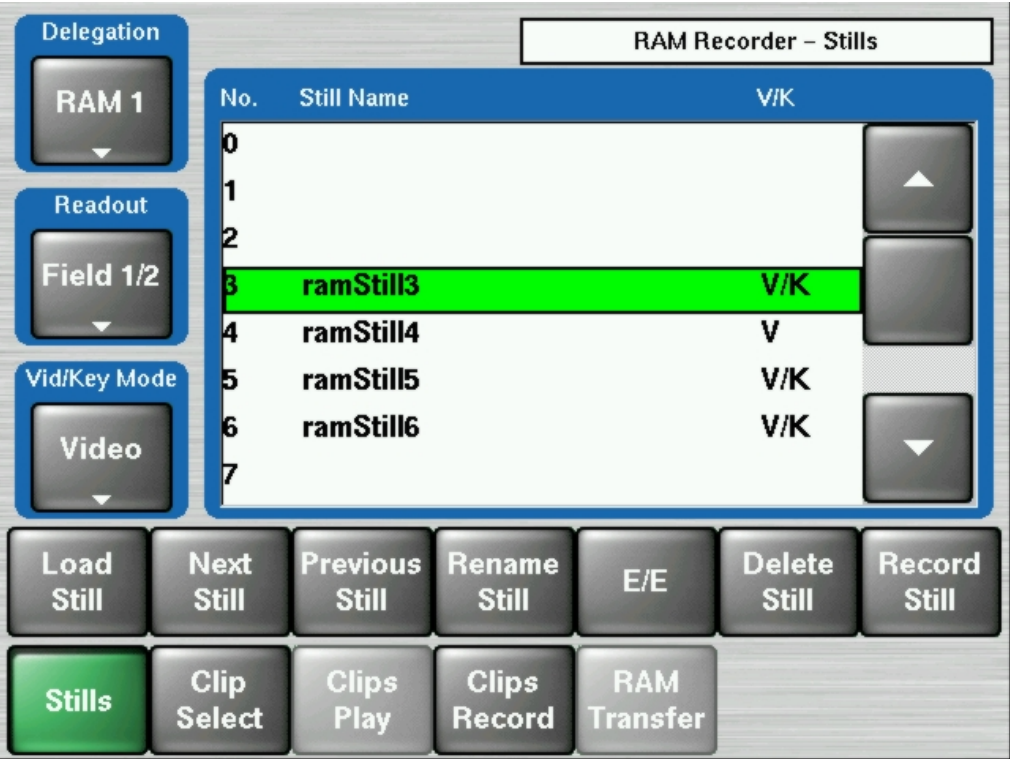


Figure 178 RAM Recorder - Stills

Select the desired channel with the **Delegation** button.

5.12.1.1 **Delegation**

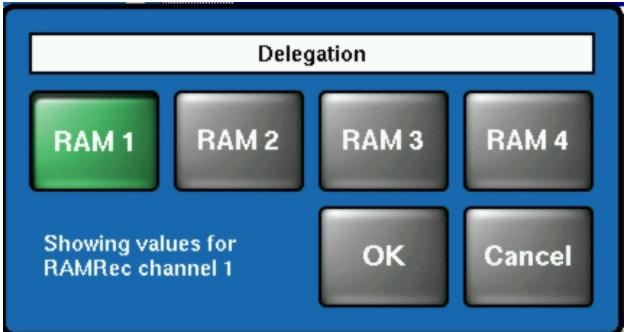


Figure 179 Delegation Buttons

5.12.1.2 Readout

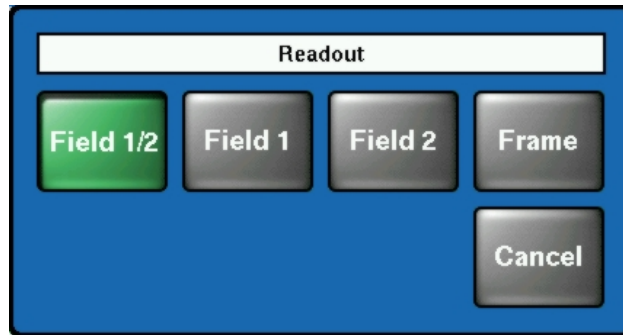


Figure 180 RAM Recorder – Readout Buttons

- **Field1/2**
Field 1 or field 2 is replicated to make a frame and **Previous Still /Next Still** advances to the next field, which results in single stepping in field resolution.
- **Field 1**
Field 1 is replicated to make a frame and **Previous Still / Next Still** advances to field 1 of the next still.
- **Field 2**
Field 2 is replicated to make a frame and **Previous Still / Next Still** advances to field 1 of the next still.
- **Frame**
Fields 1 & 2 are displayed in the normal order to show a frame and **Previous Still / Next Still** advances to field 1/2 of the next still.

5.12.1.3 Vid/Key Mode

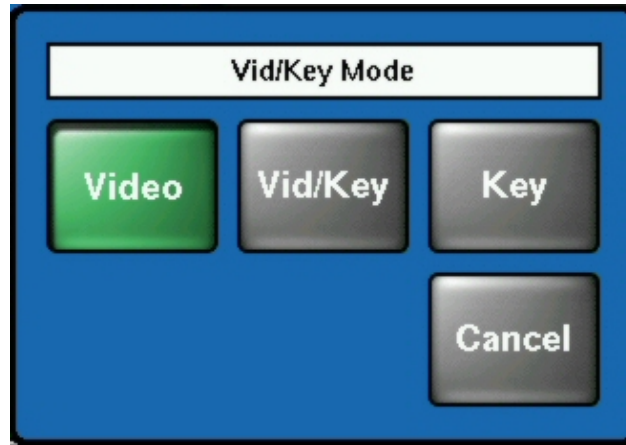


Figure 181 RAM Recorder – Vid/Key Mode Buttons

Vid/Key Mode button

When this button is active each video signal will have an associated key signal stored too. At recall the key signal will only be recalled if the Vid/Key Mode button is active. RAM 1 uses RAM 2 as its associated key channel for record and recall, while RAM 3 uses RAM 4. For more information please see the Config/Misc. menu.

Stills Video/Key Mode: Video

- **Load Still**
Load still into delegated channel.
- **Record Still**
Grab the still from the input of the delegated channel.
- **Rename Still**
Rename the selected still.
- **Delete Still**
Delete the selected still. If the still contains of video and key both parts are deleted, because a key part cannot exist without its video part.
- **Previous Still**
Load the previous available still into the delegated channel.
- **Next Still**
Load the next available still into the delegated channel.
- **E/E (E to E)**
If selected show input signal of the delegated channel, otherwise the loaded still.

Stills Video/Key Mode: Video/Key

In this mode Ram1+2 (Ram3+4) work together as a video/key pair. Ram1 and Ram3 are always the video path and Ram2 and Ram4 are the Key path.

- **Load Still**
Load the video part of the still into Ram1 (Ram3) and the key part into Ram2 (Ram4). If a still without key was selected, Ram2 (Ram4) will still show the previously loaded still (shown as yellow selection)
- **Record Still**
Grab the video part from the input of Ram1 (Ram3) and the key part from the input of Ram2 (Ram4)
- **Rename Still**
Rename the selected still
- **Delete Still**
Delete the selected still. If the still contains of video and key both parts are deleted
- **Previous Still**
Load the previous available video into Ram1 (Ram3) and the according key part into Ram 2 (Ram4). If this still does not have a key part, Ram2 (Ram4) will still show the previously loaded still (shown as yellow selection)
- **Next Still**
Load the Next available video into Ram1 (Ram3) and the according key part into Ram 2 (Ram4). If this still does not have a key part, Ram2 (Ram4) will still show the previously loaded still (shown as yellow selection)
- **E/E (E to E)**
If selected show input signals of both channels, Ram1 and Ram2 (Ram3 and Ram4) otherwise the loaded Stills.

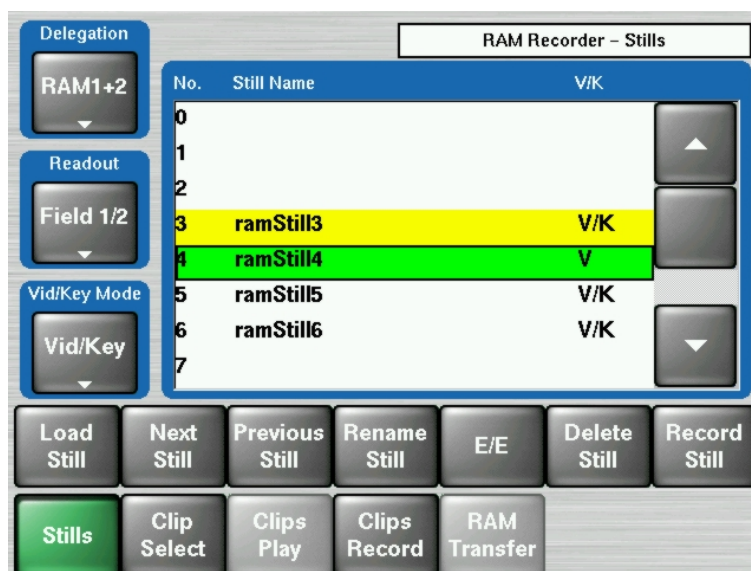


Figure 182 RAM Recorder – Stills

5.12.2 Clip Select Menu

The Clip Select menu allows the user to load, rename, and delete clips.

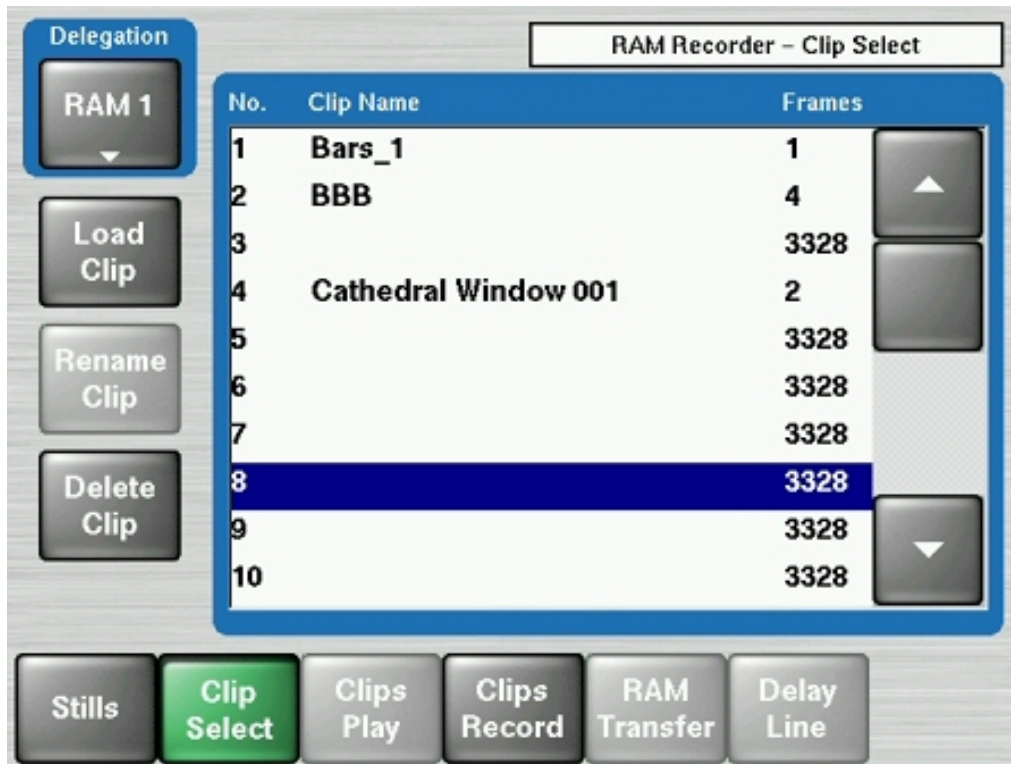


Figure 183 RAM Recorder – Clip Select

- Load Clip**
 Selects the clip to the output of the delegated channel.
- Rename Clip**
 Renames the default clip name and makes automatic name changes for associated key signals. The software will prevent changes in key signal names only and the rename button will go grey when a key signal is highlighted.
- Delete Clip**
 Deletes the clip at the selected position

5.12.3 Clips Play Menu

The Clips Play menu provides the control for playing a clip.



Figure 184 RAM Recorder – Clips Play

Begin	Moves clip to the beginning
End	Moves clip to the end
<	Play Reverse
>	Play Forward
Step - / Step +	Advances one field or frame, depending on Readout mode
Still	Goes to stop, displaying the current image
E/E	Goes to stop, showing the input signal of the delegated channel
Var	Variable speed, adjustable by the digipot

Modify

Allows you to modify the values displayed in the main display area

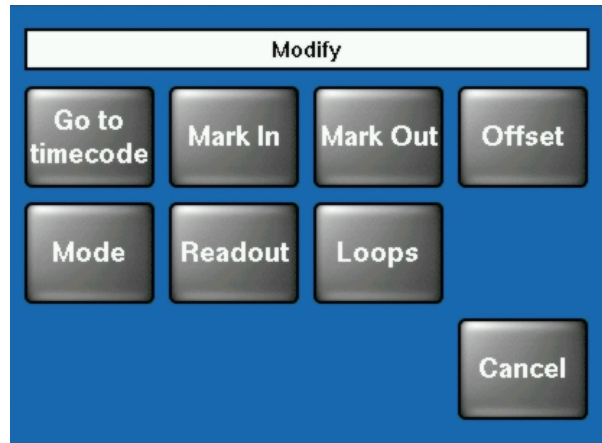


Figure 185 Modify Buttons

Go to timecode

Go to a timecode specified by the numeric popup panel

Mark In

Set a Mark In point via numeric popup panel

Mark Out

Set a Mark Out point via numeric popup panel

Offset

Used in **Extended Loop** mode

Used in **Delay Line** mode (not yet supported)

Mode**VTR**

Standard behavior like a tape machine

Clip

Mark In and Mark Out limit the accessible timecode range. When you press play the clip is always played from Mark In to Mark Out.

Simple Loop

Mark In and Mark Out limit the accessible timecode range. When you press play the clip starts at the current position, plays to Mark Out and executes then total range from Mark In to Mark Out n times, where “n” is the numbers of loops (0 = for ever).

Extended Loop

The looped section is from Mark In to Mark Out as is the case for Simple Loop mode, but in this mode play may start before Mark In and Offset determines the post Mark Out play duration.

5.12.3.1 Readout

In Still mode

- Field 1: Field 1 is replicated to make a frame and **Previous Still / Next Still** advances to field 1 of the next still
- Field 2: Field 2 is replicated to make a frame and **Previous Still / Next Still** advances to field 1 of the next still
- Frame: Field 1 or Field 2 is replicated to make a frame and **Previous Still / Next Still** advances to field 1/2 of the next still
- Field1/2 Field 1 or field 2 is displayed and **Previous Still / Next Still** advances to the next fields, which results in single stepping in field resolution.

While playing

- Field 1: Only field 1 is played out resulting in "Film look" (only 25/30 motion updates per second)
- Field 2: Only field 2 is played out resulting in "Film look" (only 25/30 motion updates per second)
- Frame: Standard play out mode
- Field1/2: This mode is useful when a still or clip is made from a graphic source which has generated motion which is not in the expected field dominance. By stepping to Field 2 by pressing Previous Still / Next Still, before playing a clip, the display order of fields is reversed to F2/F1 using this mode.

Loops

Used in **Loop** mode to specify the number of loops to be executed (0 = for ever)

5.12.4 Clips Record Menu

The Clips Record menu allows the user to create or re-record clips.

To create a new clip, press the **Record New** button. Recording starts immediately and the clip name is set to a default name. To stop recording press **Still** or **E/E**.

The **Record Edit** button allows you start recording in an existing clip at the current position. The system allows recording over the end of the current clip which results in appending to the current clip.



Figure 186 RAM Recorder – Clips Record

Trim

This function is used to select the exact range out of a recorded clip, e.g. to create an endless loop without any disturbance. When pressed the total clip is trimmed to the “In” and “Out” values.

Delay Line

When switched on, the according channel behaves like a delay line, the desired delay can be specified via Modify/Record Length.

NOTE!

When you change the Record Length value while you are in Delay Line mode the new value is not accepted unless you leave and re-enter this mode.

Begin	Moves clip to the beginning
End	Moves clip to the end
< / >	Play Reverse / Play Forward
Step - / Step +	Advances one field or frame, depending on Readout mode
Still	Stops replay and displays the current image as a frame or field depending on Readout mode.
E/E	Goes to stop, showing the input signal of the delegated Channel
Var	Variable speed, adjustable by the digipot

5.12.5 RAM Recorder Live Mode Menu

Selecting the **Live Mode** button (left of the display) reduces the number of parameter adjustments to the most essential ones, allowing faster control with less selection steps.

By pressing the button during RAM Recorder operation, a keypad with direct access to the stored stills and clips appears.

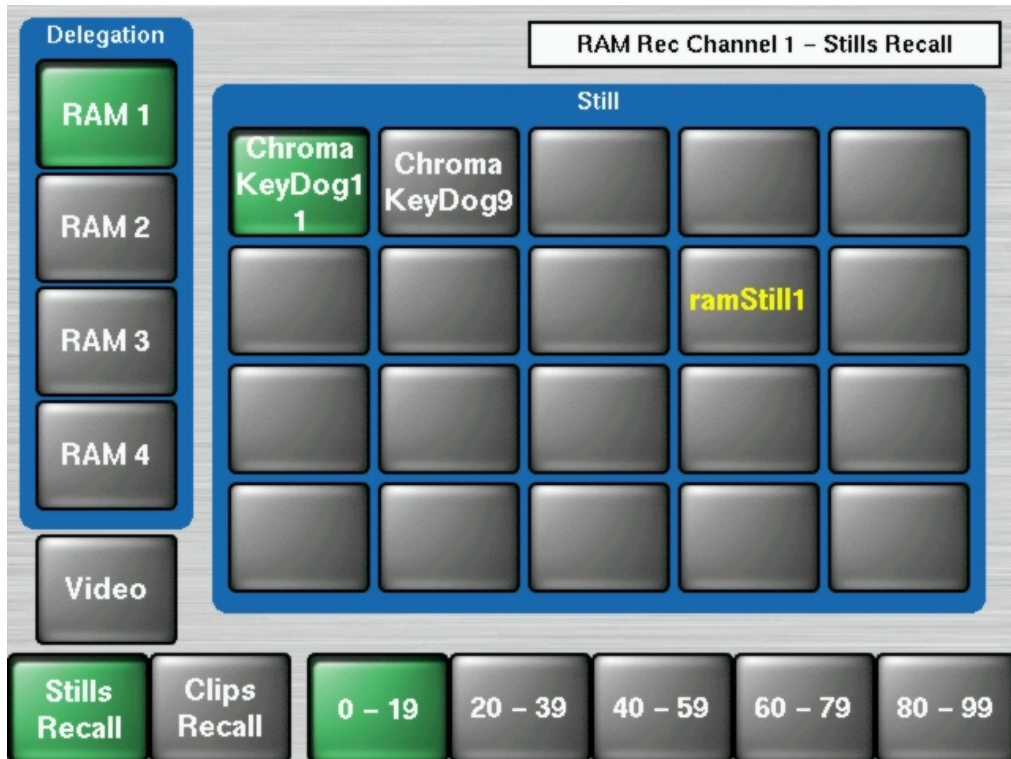


Figure 187 RAM Recorder – Live Mode Stills Recall

Stills Recall

- Select the according Ram channel via Delegation
- Select the group of stills, e.g. 0-19
- Select Video or Video/Key mode.
 1. Video Mode
Only the video part of the still is loaded in the selected channel
 2. Video/Key Mode
In this mode Ram1+2 (Ram3+4) work together as a video/key pair. The video part of a still is loaded in Ram1 (Ram3) and the key part of a still is loaded in Ram2 (Ram4). If a still does not contain a key part, only the video part will be loaded into Ram1 and Ram2 keeps its previous image.

NOTE!

Stills containing video and key are displayed in yellow characters, video only in white.

In this Live-Menu the “Key-Only” video/key mode (only used for recording) is not supported.

5.12.6 RAM Transfer Menu

The RAM Transfer menu provides possibilities to transfer clips or stills from/to RAM store or USB flash memory sticks:



Figure 188 RAM Recorder – Clips/Stills Transfer

In the different submenus (**Stills to USB**, **Stills to RAM**, **Clips to RAM** and **Clips to USB**) the clips or stills are listed, can be renamed and the transfer started.

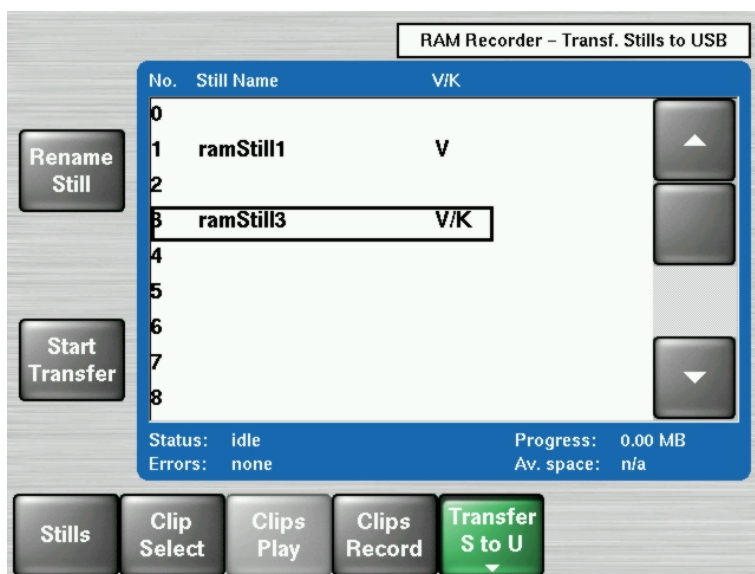


Figure 189 RAM Recorder – Transfer Stills to USB

In the submenu **Stills to RAM** and **Clips to RAM** clips and stills stored in the RAM can be deleted.



Figure 190 RAM Recorder – Transfer Stills to RAM

5.13 E-Mem Menus

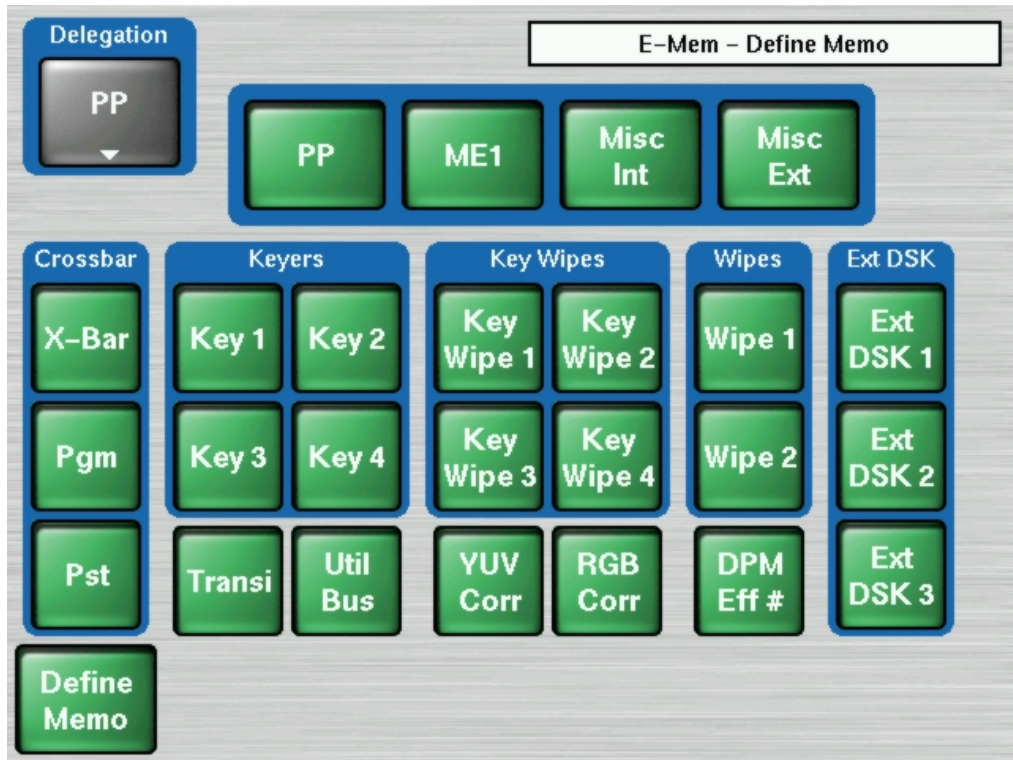


Figure 191 E-Mem – Define Memo PP

The Define Memo menu serves to define the function groups of the KayakDD switcher, which are to be stored or recalled in an E-Mem snapshot or timeline.

The top level buttons; PP, ME1, Misc Int and Misc Ext allow group enable or disable of the single functions named in the sub-menu relevant to the group on a keyframe by keyframe basis. (See next figures.) In each sub-menu individual functions may be enabled or disabled on a keyframe by keyframe basis.

NOTE!

The selection of recorded functions made in Define Memo menu for any E-Mem will only be honoured at recall if AUTO-RECALL is enabled.

Page for selecting the ME1 switcher functions:

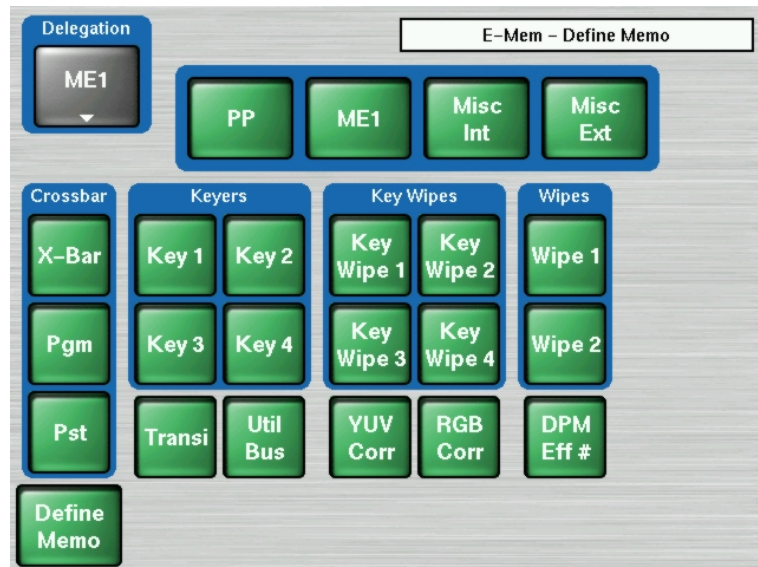


Figure 192 E-Mem – Define Memo ME1

Page for selecting miscellaneous internal ME independent switcher functions:

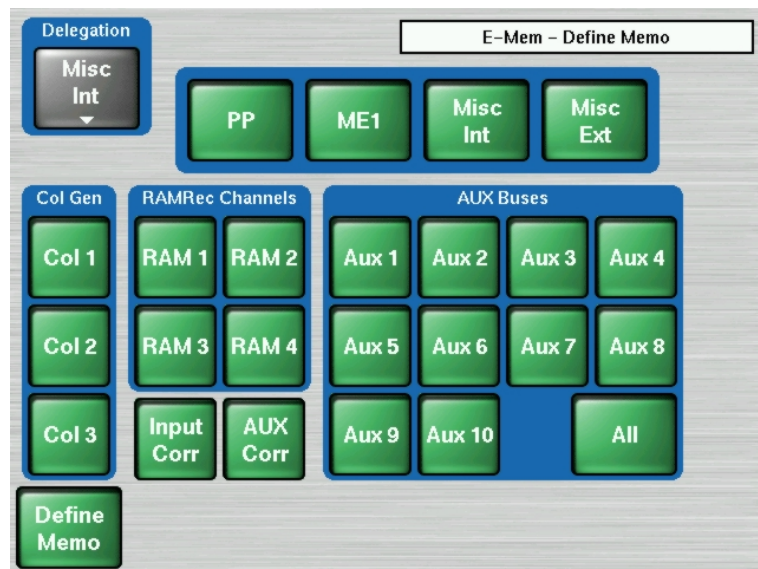


Figure 193 E-Mem – Define Memo Misc Intern

Page for selecting miscellaneous external switcher functions:

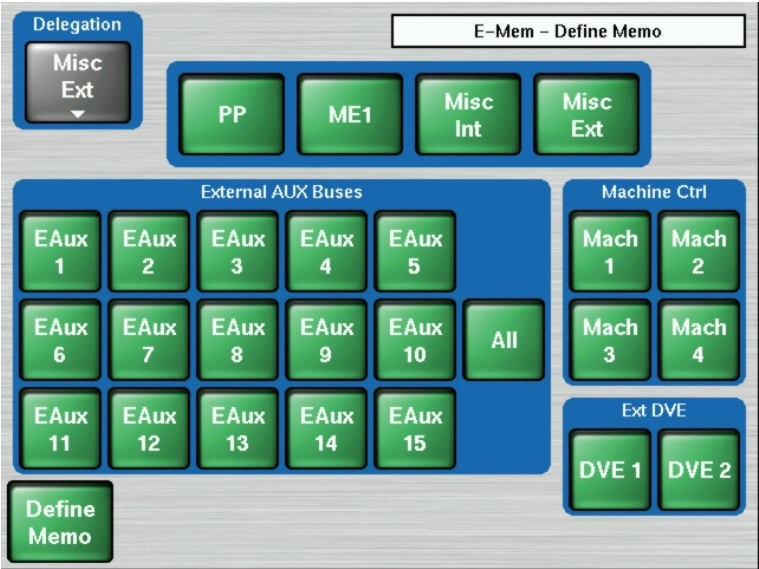


Figure 194 E-Mem – Define Memo Misc Extern

5.14 Media Player Menus

The Media Player menus serves to control external VTRs or other Media Servers. The KayakDD offers a set of protocols that allow the user to connect and control virtually all video servers, disk recorders, and VTRs on the market.

The protocols to select from are:

- BVW75 (industry standard VTR protocol)
- Mediapool
- Odetics
- VDCP (aka Louth), there are specialized versions for the Profile™ server family.
- Pbus

With these protocols the KayakDD can control:

- VTRs (BetaCam, DVCPPro, etc.)
- Video Servers
- Disk Recorders
- other media players

The list of servers that have at least one of the protocols implemented includes:

- Thomson Grass Valley: Profile, Profile XP, M-Series
- Thomson: Nextore
- Philips: Mediapool™
- Leitch (ASC): VR300, VR400
- DVS: ProntoVision, etc
- Sea Change
- Pinnacle: MediaStream (HP), Thunder
- Pluto

Disk recorders that have at least one of the protocols implemented include:

- Accom: Attache, WSD
- Abekas: A66, Diskus
- Edifis: Brick, Sting
- Fast Forward Video: Omega deck
- ...

Several of the DDRs and Servers listed offer more than one protocol. In many cases Odetics and VDCP. The set of implemented functions may differ. Please refer to the respective manufacturer's documentation to find out which of those protocols is more suitable for your application.

5.14.1 Clip Select Menu

In the clip menu a clips list generated from a media server can be loaded.

Color coding in the list:

- Green marked clips: selected clip
- Blue marked clips: next selected clip



Figure 195 Media Player – Clip Select

5.14.2 Clips Play Menu

The Clips Play menu allows the user to control the connected machine.



Figure 196 Media Player – Clips Play

5.14.2.1 Machine Delegation

The external machines can be selected with the delegation buttons. Gang mode is possible by selecting more than one button.

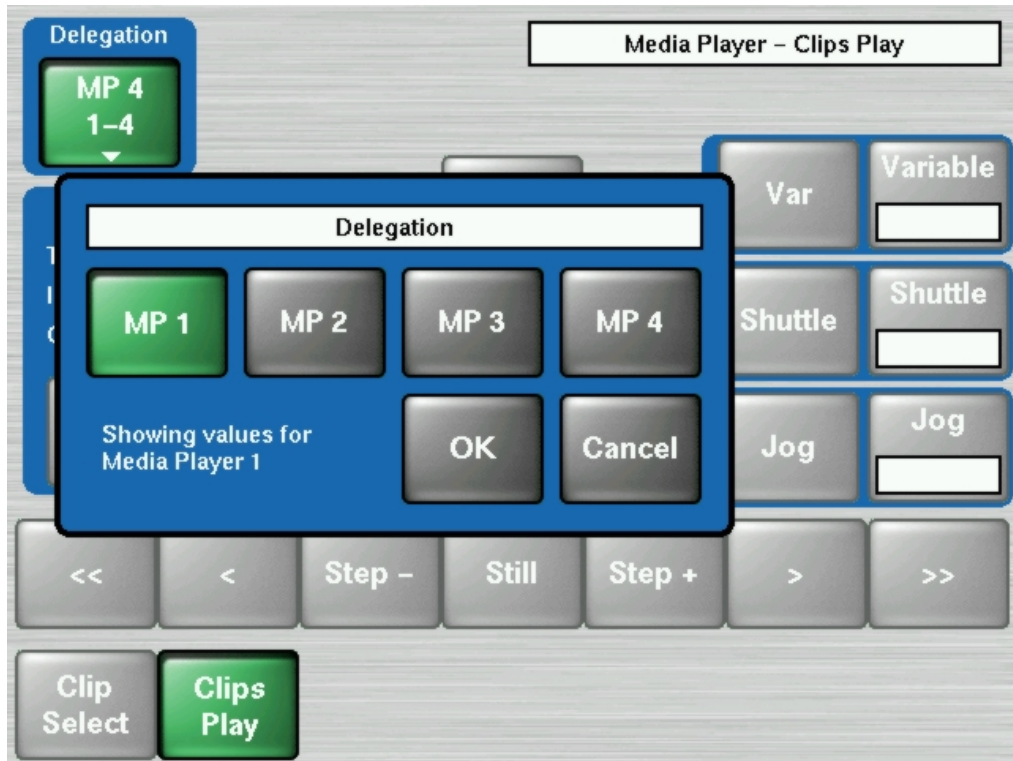


Figure 197 Media Player – Delegation

5.15 *Other Menus*

As the KayakDD software is enhanced, additional menus, subcategories, and controls will become available. Once you understand the principles of KayakDD system menu organization and operation, you will be able to quickly learn these new menus and use them effectively for your work.

6 System Operation

6.1 Introduction

The basic KayakDD system is operated using button and lever control on the control panel, and touch screen and knob controls on the Menu panel. Text and number entry is also possible via a popup keyboard.

The Main control panel is used during live operation for fast, real time control. The menus are generally used in conjunction with the panel controls to set up effects and for system configuration. Since some adjustments and selections can only be performed via menu, a special live mode is available for some menus, allowing limited – but fast access.

Effects can be saved for future immediate recall, allowing fast and precise control of complex visual effects in real time.

For advanced control a Sidepanel program is available which can run on a computer with operating system Windows95 or higher.

6.2 Matte Menu Controls

Use the following procedure to change matte settings in any of the Matte menus.

- Go to the according Mattes menu.
- If not already selected, touch the **Wash Control** data pad to bring up the Wash Source selection and the control for **Size/Offset** and **Softness** via digipot controls.
- If necessary, use the **Size/Offset** and **Softness** knobs to make the wash edge visible on the screen.

Size/Offset

Normally this parameter is named Size. When you are e.g. adjusting the Border Matte for a wipe generator for a background transition, which uses the same wipe generator for wash control as is used for the wipe transition itself, it is named offset.

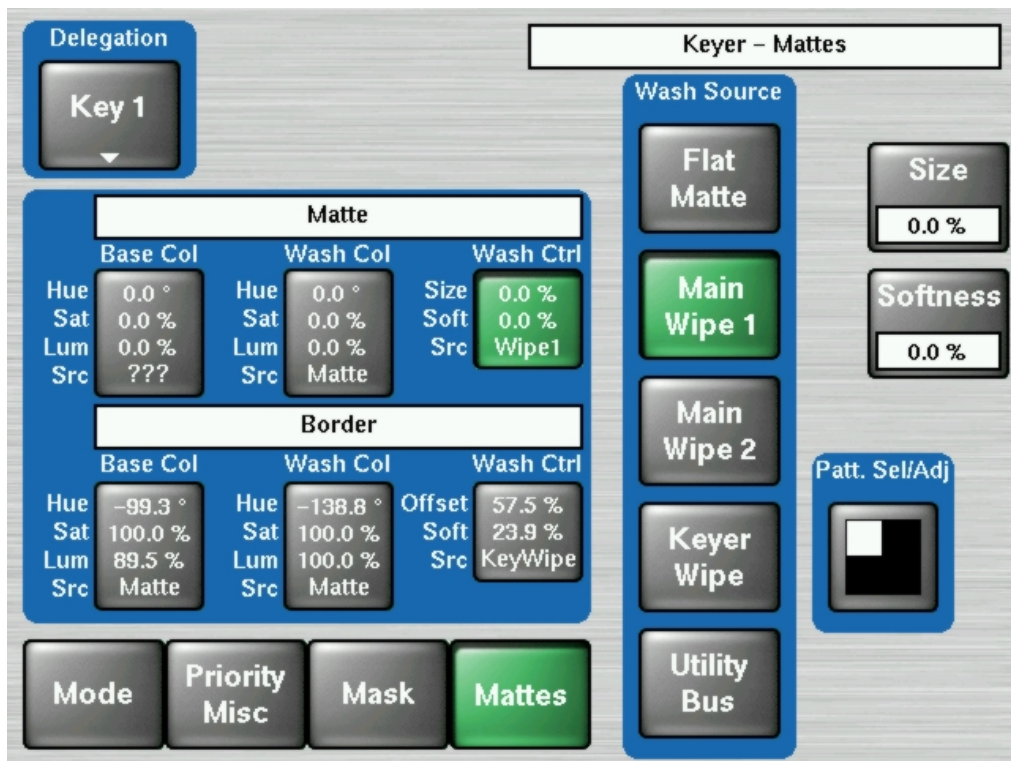


Figure 198 Matte Menu, Wash Control Selected

- Touch the **Base Color** data pad and use the top three digipots to adjust **Hue**, **Saturation**, and **Luminance** of the base fill color (Figure below).
- Touch the **Wash Color** data pad to delegate the digipots on the right to adjust **Hue**, **Saturation**, and **Brightness** of the wash fill color.

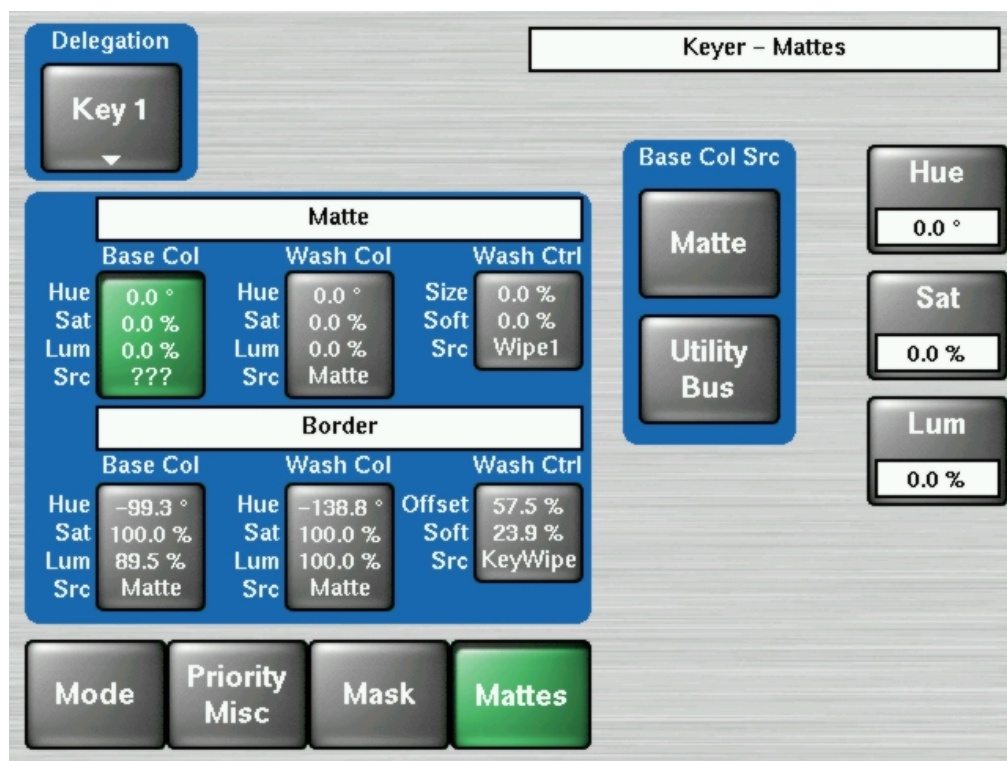


Figure 199 Matte Menu, Base Color Selected

6.3 Keyer Priority

Video switchers with only two keyers per bank use a simple key over, key under mechanism to control the stacking of the keys. Only one key can be located over the other. The KayakDD system has four keyers, so more complex stacking is possible. Keys can be placed between other keys, using key priority.

6.3.1 To Change the Current Keyer Priority

1. Go to the Keyer – Priority menu by touching the **Keyer** button in the Home menu, then touch the **Priority/Misc** category selection button

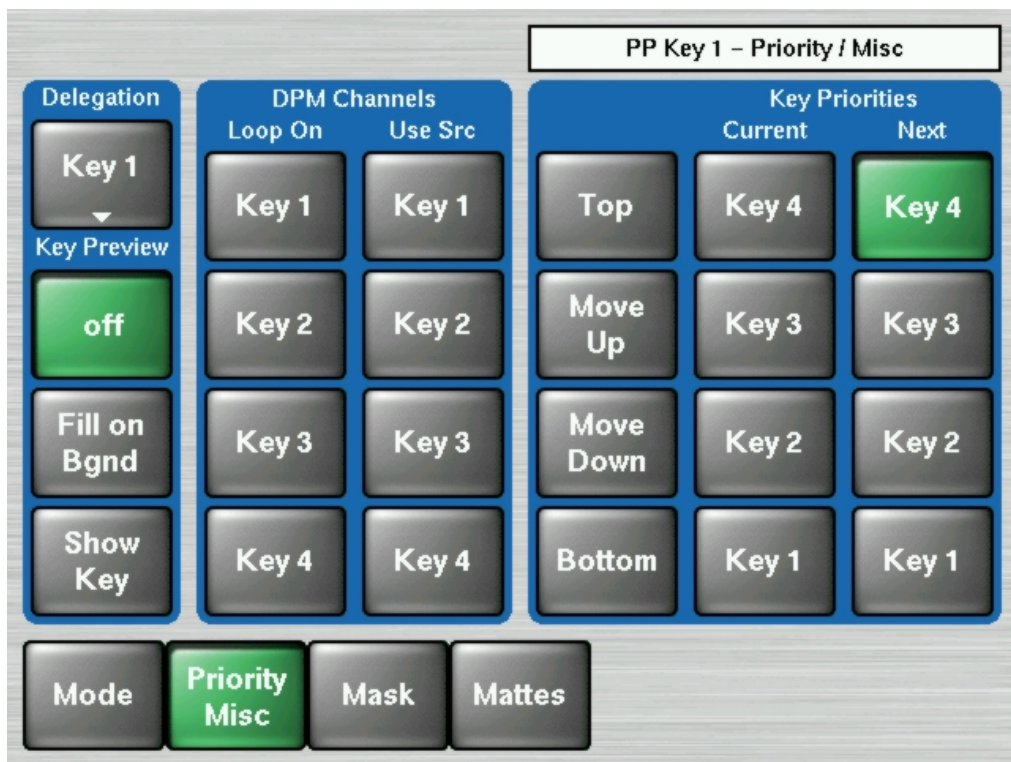


Figure 200 Keyer Priority Menu, Current Stack Selected

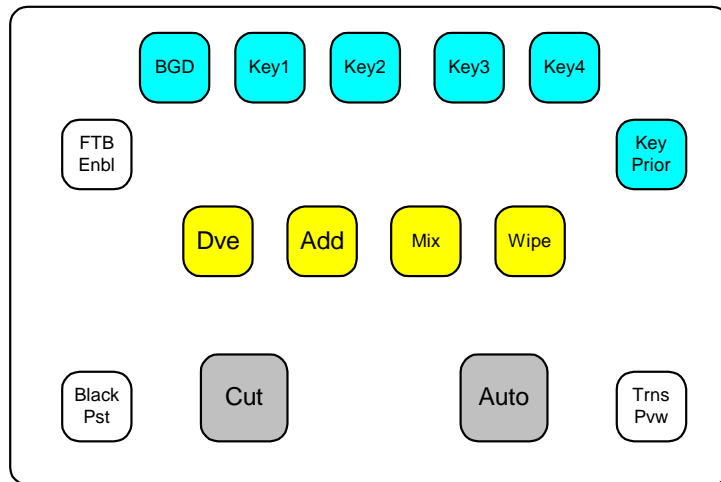
2. If not already set up, turn on the desired keys and arrange them so they overlap, observing the Program monitor. This will make the changes in key priority visible. For demonstration purposes, you can use four preset pattern keys.
3. Touch the keyer you wish to move in the stack in the Current column, then use the **Top**, **Move Up**, **Move Down**, and **Bottom** buttons on the left to place the key in the desired location. The key priority order changes immediately, as a cut.

6.3.2 To Transition Between Different Keyer Priorities

Key priority transitions use a Current priority stack and a Next priority stack. The transition occurs between the two stacks.

1. Press the **Key Prior** Transition element button in the Transition subpanel

Transition Subpanel



2. If not already set up, turn on the desired keys and arrange them so they overlap, observing the Program monitor. This will make the changes in key priority visible. For demonstration purposes, you can use four preset pattern keys.
3. Delegate that M/E for preview in the Preview subpanel. This shows the end result of the transition (the Next priority).
4. Go to the Keyer-Priority menu by pressing the **Keyer** button in the Home menu, then touch the **Priority/Misc** category selection button.
5. The current stack in the menu is automatically set to what is currently being output. You can change the Current priority stacking order if desired, as described in *To Change the Current Keyer Priority*.
6. Set up the Next priority stacking order, selecting the keyers in the Next column and then using the **Top**, **Move Up**, **Move Down**, and **Bottom** buttons (Figure below). The new stack will be visible on the preview monitor.

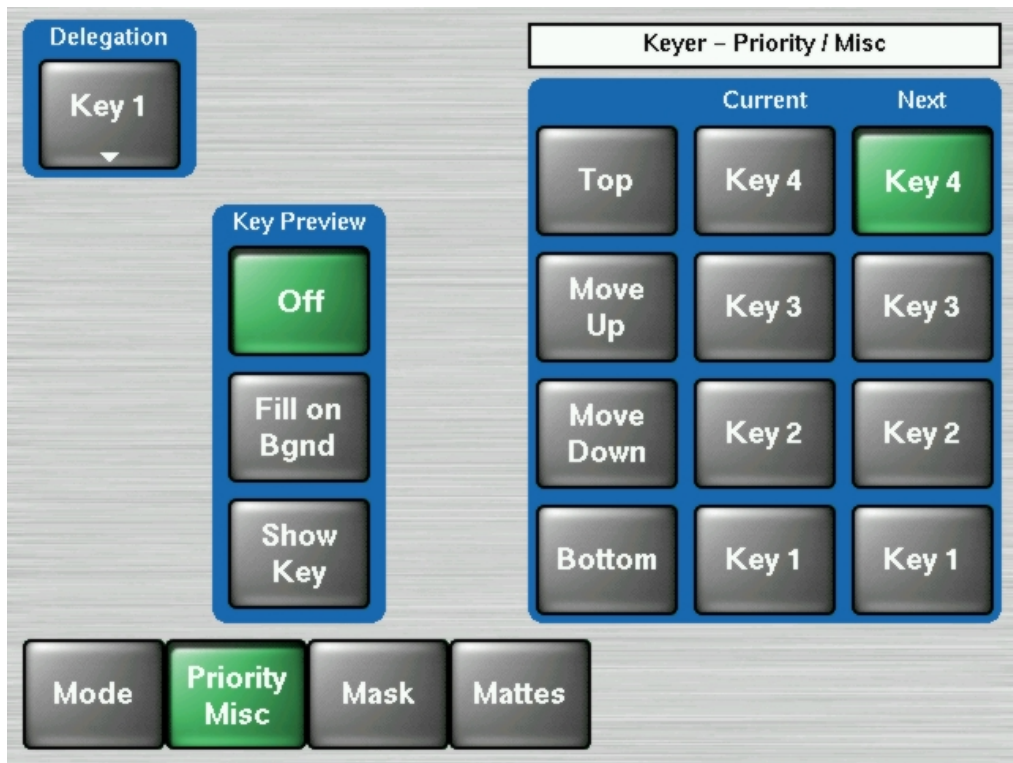


Figure 201 Keyer Priority Menu, Next Stack Selected

7. Select the type of transition, using the Mix or Wipe buttons in the Transition subpanel. If you selected a wipe, go to the Wipes menu by double pressing one of the Wipe buttons, and then touch the pattern and any modifiers to be used with the wipe.
8. Move the lever arm or press the Auto Trans button in the Transition subpanel to perform the key priority transition. The transition is shown on the Program monitor.

6.4 Chroma Key Operating Notes

The KayakDD system features chroma keyers with powerful controls. These controls offer subtle adjustments to allow successful keying of difficult subject matter (fine hair, smoke, translucent objects, etc.), and to overcome some problems resulting from imperfect chroma key set coloring or lighting.

Section - Concepts of the KayakDD this Manual - includes chroma key background information useful for understanding the chroma key controls. The following information provides more detailed instructions on how to set up a chroma key using the Auto Setup feature and the manual controls in the Keyer menu.

6.4.1 Auto Setup

The first step of setting up most chroma keys is to use Auto Setup. Auto Setup automates the first steps to achieving a chroma key. Auto Setup performs the following:

- Calculates primary suppression Hue and Luminance.
- Sets primary suppression Selectivity and Chroma to defaults.
- Calculates Clip Low, and sets Clip Hi to default.
- Sets all the secondary suppression values to duplicate the primary suppression values, but turns secondary suppression off.
- Changes Opacity temporarily to 100% to permit an accurate backing color sample, and then returns it to its original setting.
- Sets Key Position and Size values to default (0).

Two different Auto Setup algorithms are available, one for well designed and lighted sets (**FGD Fade** off), and the other for more challenging sets (**FGD Fade** on). Depending on individual circumstances, additional manual adjustments may be required after you use Auto Setup.

After an Auto Setup has been initiated, you can cancel it by pressing the Auto Setup button again, but the chroma key will retain the default settings imposed.

6.4.2 To Chroma Key Using Auto Setup

1. Go to the Keyer – Mode menu by touching the **Keyer** button in the Home menu, then touch the **Mode** category and select Chroma Key as key mode.
2. Choose on the selected keyer's key bus the chroma key source containing the chroma key backing color.
3. Choose on the Program bus the source that will be used to replace the backing color of the chroma key source.

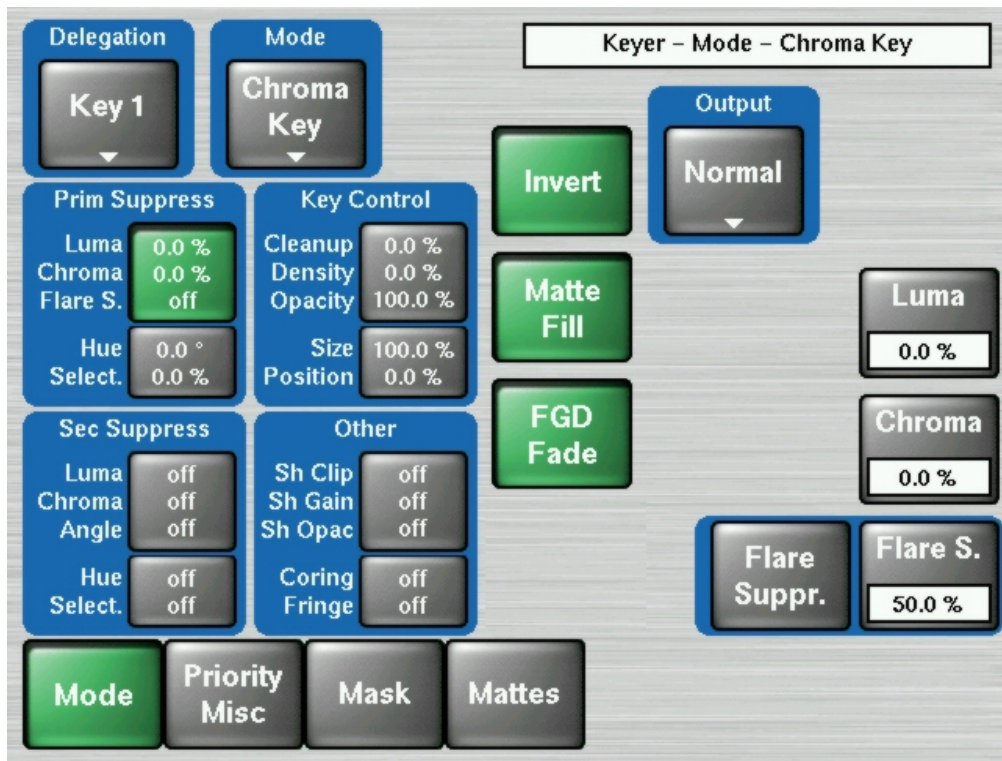


Figure 202 Keyer Menu, Chroma Keyer

4. Press the **Auto Setup** button or the Positioner button on the top of the joystick. Preview for that M/E will now display the chroma key source with a superimposed cross hair cursor. The cursor actually represents a box of 16 x 16 pixels.
5. Use the Positioner to position the cursor on the backing color. Select a darker area, if one exists, to optimize the backing color suppression.
6. Press the button on top of the Positioner. The chroma key will be set up automatically using the average of the colors selected by the cursor box. If **FGD Fade** was off, fine edges of the key will be preserved.

7. If this chroma key is acceptable, you are done. If set, lighting, or other conditions prevent the result from being acceptable, you need to decide whether to adjust the chroma key manually or use Auto Setup with **FGD Fade** on.
 - Manual adjustment permits retention of fine edge detail (see *Manual Chroma Key Adjustments*). In particular, if there are problems with translucent areas (hair, smoke) secondary suppression controls can be useful (see *Secondary Color Suppression*).
 - Auto Setup with **FGD Fade** on produces a chroma key with harder edges, but accommodates wider set variations (see below).

6.4.3 To Chroma Key Using Auto Setup with FGD Fade

If the set is lit unevenly or has other problems, **FGD Fade** is available to help solve the problem. A better alternative, if time permits, is to adjust the lighting on the set to even out the backing color. This may improve the key so that **FGD Fade** is not needed.

1. If you decide you must use **FGD Fade**, follow the Auto Setup procedure described above, but set **FGD Fade** on in the Keyer menu. After selecting the backing color area and touching the top button on the Positioner, the chroma key will be set up with coarser values better able to handle set variations.
2. If this chroma key is acceptable, you are done. If you are still not satisfied, you can fine tune the chroma key using manual adjustments.

6.4.4 Manual Chroma Key Adjustments

If the Auto Setup of the hue fails to provide a suitable chroma key, additional controls are available in the Keyer Menu for fine tuning the key.

Chroma key manual set up consists of choosing the best set of compromises to provide adequate detail and color fidelity to meet your needs. While using this menu you need to view the chroma key scene on a monitor. A vectorscope and waveform monitor can also be very useful when setting up a chroma key. During set up you need to focus your attention on particular areas of the foreground, background, and/or composite. The areas you look at will change depending on the individual controls being used.

Via the popup button Output you can select **FG Only** or **BG Only** to remove extraneous picture information, allowing you to view only those areas of the composite.

Chroma key set up procedures follow a recommended order, as indicated by the numbered steps displayed on the menu. However, requirements can vary depending on each individual scene. You may need to go back to earlier steps and readjust previous settings to optimize the key. Understanding what the chroma key controls do will help you decide what adjustments are required for your individual situation.

6.4.5 Primary Suppression

Primary suppression is the most critical chroma key parameter, and the easiest to set. Auto Setup should take care of this, but manual adjustments can be made if desired. If primary suppression is set wrong, however, it will be impossible to achieve a good chroma key with the other controls.

Primary Suppression should be set while looking at the foreground. Ideally the backing color will appear as a small dot on the vector scope and a perfectly flat line on the waveform display, but this never occurs due to set lighting variations, shadows, etc. This means you will need to pick the best suppression for the overall look of the key.

1. Touch the 1 Prim Suppress data pads, if necessary, to activate these controls.
Data Pad 1 contains Luma / Chroma / Flare Suppression
Data Pad 2 contains Hue and Selectivity

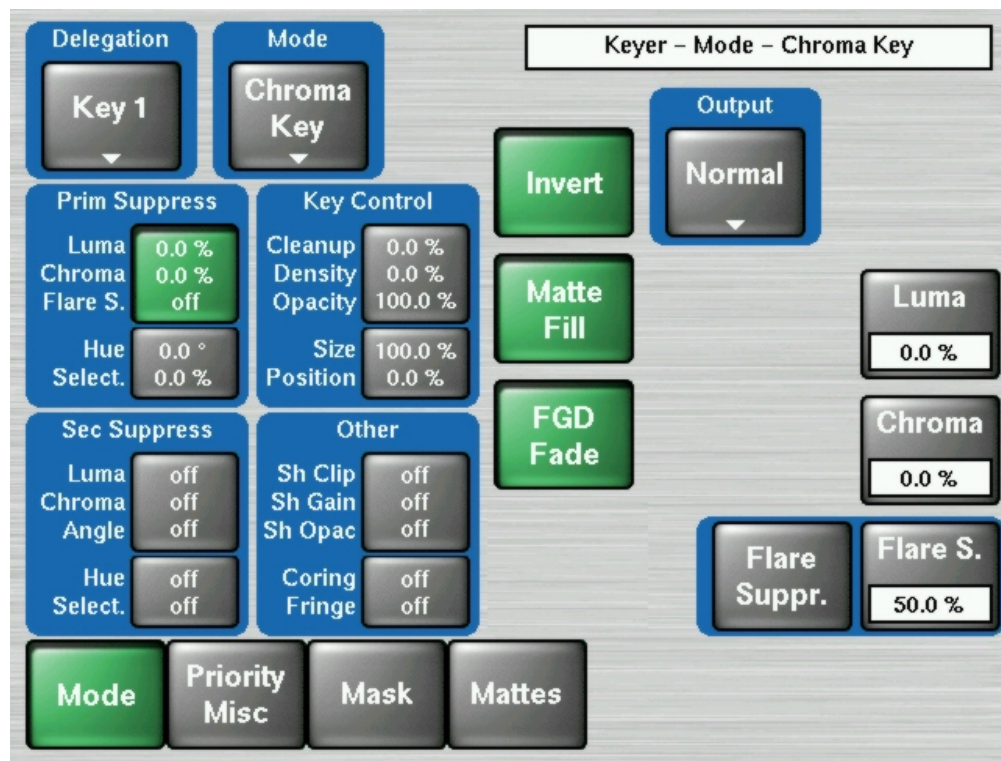


Figure 203 Keyer Chroma Menu, Pri Suppress, Part1, Luma / Chroma / Flare S.

2. Adjust Hue, Selectivity, Chroma, and Luma primary suppression to eliminate the backing color.
 - **Hue** can be set accurately with Auto Setup. **Hue** should center on the primary color of the backing area of the foreground scene. Depending on where **Luma** and **Chroma** primary suppression are set, adjusting **Hue** may not make any noticeable change on the scene. **Chroma** suppression should be preset to 100% and **Luma** set to 0%. Hue can then be tuned to remove the backing color.
 - **Selectivity** may need to be increased if there are colors in the foreground image that are being suppressed. **Selectivity** should be set as low as possible without including colors that should not be suppressed. For example, when keying on green, a greenish yellow shirt might be affected by the suppression. If so, adjust the selectivity high enough to reject that color. Too high a selectivity is one of the classic causes of a noisy key. If the foreground subject is stationary, consider using a force mask instead of increasing selectivity.
 - **Chroma** suppression can be set accurately with Auto Setup. To adjust, increase **Chroma** suppression and observe the backing color dot on the vector scope move toward the center. You want to center it exactly, so no chroma exists in the backing area. 100% chroma suppression is the correct setting for all chroma keys. At this point, you will probably see a line through the center of the vector scope. With increased selectivity, this line will become an arc.
 - **Luma** suppression adjustments may be necessary if shading is visible in the backing area with **FG Only** selected, or if the shading adversely affects the background image. Primary Luma suppression is hardly ever desired when FGD Fade is on. To adjust, increase **Luma** suppression and observe the backing color move toward black. You want to make the backing color just black. Increasing this control too much will make the chroma key hard and noisy. When not enough, highlights will be added to the background. Note that incomplete luminance suppression is not necessarily bad. The highlights added to the background will match the shading on the backing wall, adding natural shadows and perhaps eliminating the need to add artificial shadows.
 - All the above adjustments may need to be revisited later.
3. Another potential artifact of chroma keying is a tinting of the overall foreground subject due to lighting splash from the backing color or lens flare. Flare Suppression adds a small amount of color to the entire foreground image to cancel the splash or flare. Typically less than 2% of the backing color is needed to neutralize the flare.

6.4.6 Key Controls

The purpose in adjusting **Clip Hi** and **Clip Low** is to cause the proper hole to be cut in the background. All areas of the backing color should be full background while all areas of the foreground should make the background completely invisible. The easiest way to do this is to observe the key signal while making your adjustments.

The smaller the difference between **Clip Hi** and **Clip Low**, the higher the keyer gain. High gain amplifies noise present in the transition between transparent and opaque. The correct setting is with **Clip Hi** and **Clip Low** set to just barely achieve opacity and transparency, respectively.

1. Touch the **Key Controls** data pads to activate these controls.
Data Pad 1 contains Clip Hi / Clip Low / Opacity
Data Pad 2 contains Size and Position
You can now manually adjust keyer clipping controls.
2. Press the **Key PVW** button on the Main control panel and look at the preview output on a picture and waveform monitor.

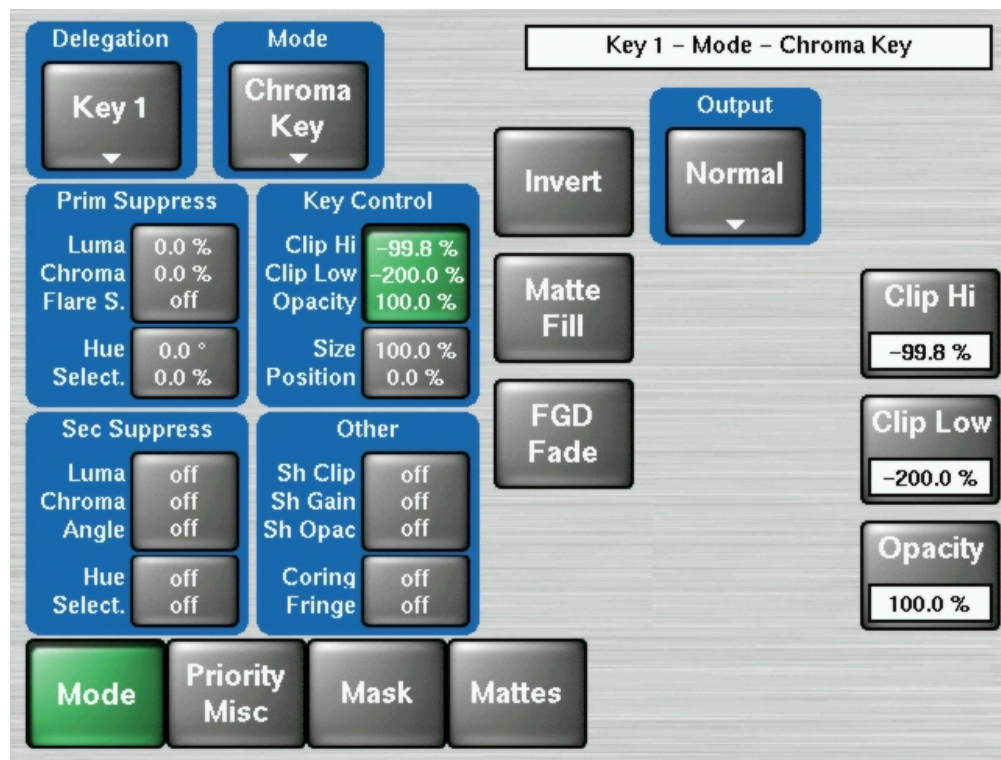


Figure 204 Key Controls, Part1, Clip Hi, Clip Low, Opacity

3. Adjust **Clip Hi** so that all areas of the foreground objects are white. If **Clip Hi** is set too low (too far clockwise), much of the translucent areas will be forced to be fully opaque, hardening the key and darkening the transition area between background and foreground.
4. **Clip Low** can be set accurately with Auto Setup. Adjust **Clip Low** so that all areas of the backing color are black. If **Clip Low** is set too high (too far counter-clockwise), translucent areas will be forced fully translucent, hardening the key.

NOTE!

When adjusting clip levels, remember that areas on the edge of the foreground subject should show as shades of gray. Gray indicates areas of translucency, which is desirable in chroma keying.

5. Check the final results with **Key PVW** off and the chroma keyer in normal mode (**FG Only** turned off). Note that incorrect adjustments can create a hard, noisy key.
6. If the chroma key now looks good, you are done. If dark edges are present, there may be too much primary **Luma** suppression or **Clip Hi** or **Clip Low** may be set improperly. If adjusting these parameters fails to solve the problem, you should consider activating the Reshape feature.

6.4.7 FGD Fade

FGD Fade is useful when shading variations exist in the backing color. A better alternative, if time permits, is to adjust the lighting on the set to even out the backing color. This may improve the key so that FGD Fade is not needed. FGD Fade helps with backing color suppression at the expense of a harder looking key with more noticeable edge artifacts. A drawback of FGD Fade is loss of detail in the keyed edge. For example, smoke and hair in the foreground will probably be lost.

1. Touch the **FGD Fade** button to activate this feature.
2. Set primary **Luma** suppression to 0.
3. You can now readjust the **Clip Hi** and **Clip Low** controls if necessary to fine tune the key as described above.
4. When **FGD Fade** is on, key resizing and positioning also become available to clean up the key edges.
 - **Size** narrows the key signal and can remove much of the blue or green edge on the foreground subject.
 - **Position** moves the key signal left and right, and can be used to reduce a color edge along only one side of the foreground.

6.4.8 Secondary Color Suppression

Secondary color suppression is intended to improve the color of translucent areas (e.g., glass or smoke) or fine detail near the edge of a foreground subject (e.g., hair). These areas can be take on some of the backing color.

Much less secondary suppression will be needed than is used for primary suppression, because the foreground color is only partially corrupted by the backing color. Because there is a mixture of backing color and foreground color, the secondary suppression Hue and the direction (Angle) will be different from primary suppression. Primary suppression removes the backing color, while secondary suppression corrects the color in translucent areas.

NOTE!

If FGD Fade has been applied, it is unlikely enough edge detail will remain to use secondary color suppression.

1. Touch the **Sec Suppress** data pads and then touch the **Sec Suppr.** button to activate this feature (Figure below).
 - Data Pad 1 contains Luma / Chroma / Angle
 - Data Pad 2 contains Hue and Selectivity

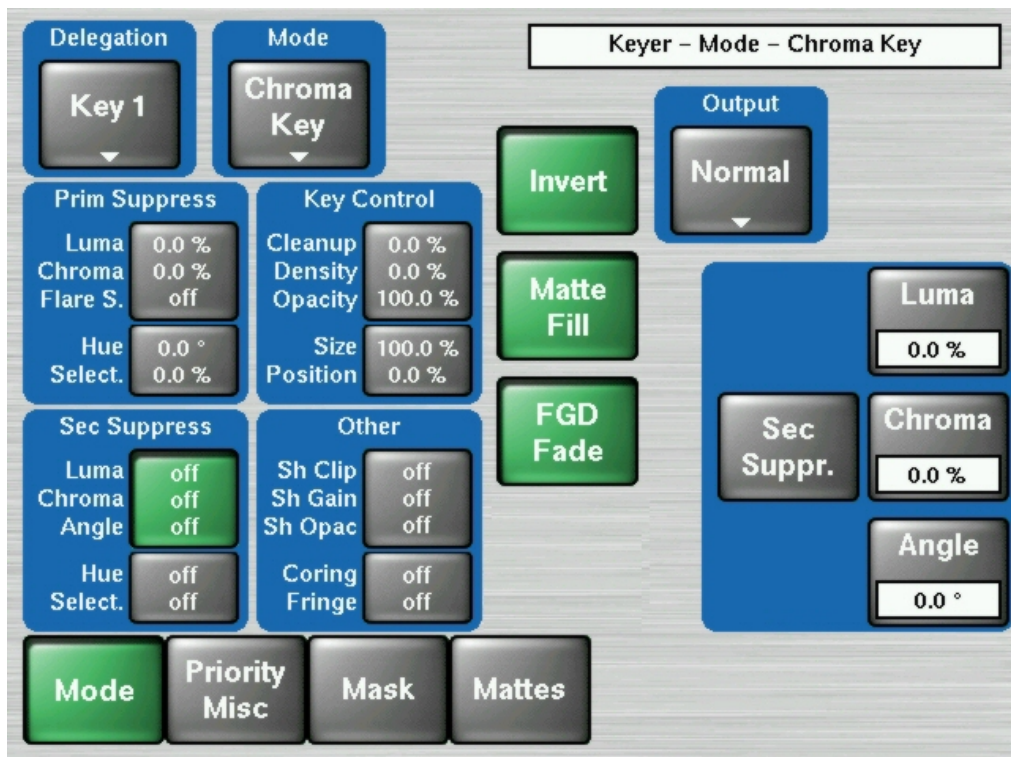


Figure 205 Sec Suppress Controls Part1, Luma / Chroma / Angle

2. Adjust secondary suppression **Hue** and **Selectivity** so that the translucent area is affected, but opaque areas of the foreground are not. The final hue will lie somewhere between the backing color (primary suppression hue) and the uncorrupted foreground color.
3. When making this adjustment, it is helpful to turn the secondary **Chroma Suppression** to maximum, and the secondary **Suppression Angle** to produce an unnatural color in the affected area. This makes the changes to secondary suppression more obvious.
4. **Selectivity** should be kept as wide as possible. You should only narrow selectivity (increase its value) if you cannot avoid changing opaque areas of the foreground.
5. Adjust the secondary **Angle** so that changing secondary **Chroma** suppression moves the color in the desired direction. You are trying to match the color of the translucent areas to an opaque (uncorrupted) area of the foreground subject.
6. Decrease secondary **Chroma** suppression for the best match between corrupted (translucent) and uncorrupted (opaque) areas. Interaction between secondary suppression **Angle** and **Chroma** suppression may require repeating these adjustments.
7. Increase secondary **Luma** suppression to balance lightness of the translucent and opaque areas.
8. Repeat secondary suppression **Angle**, **Chroma** suppression and **Luma** suppression for best results.

6.4.9 Other Chroma Key Controls

Additional chroma key controls are available by touching the **Other** data pads (Figure below). Coring, fringe, and shadow controls can be individually activated by touching the labeled buttons.

Data Pad 1 contains Shadow Clip / Shadow Gain / Shadow Opacity

Data Pad 2 contains Coring and Fringe

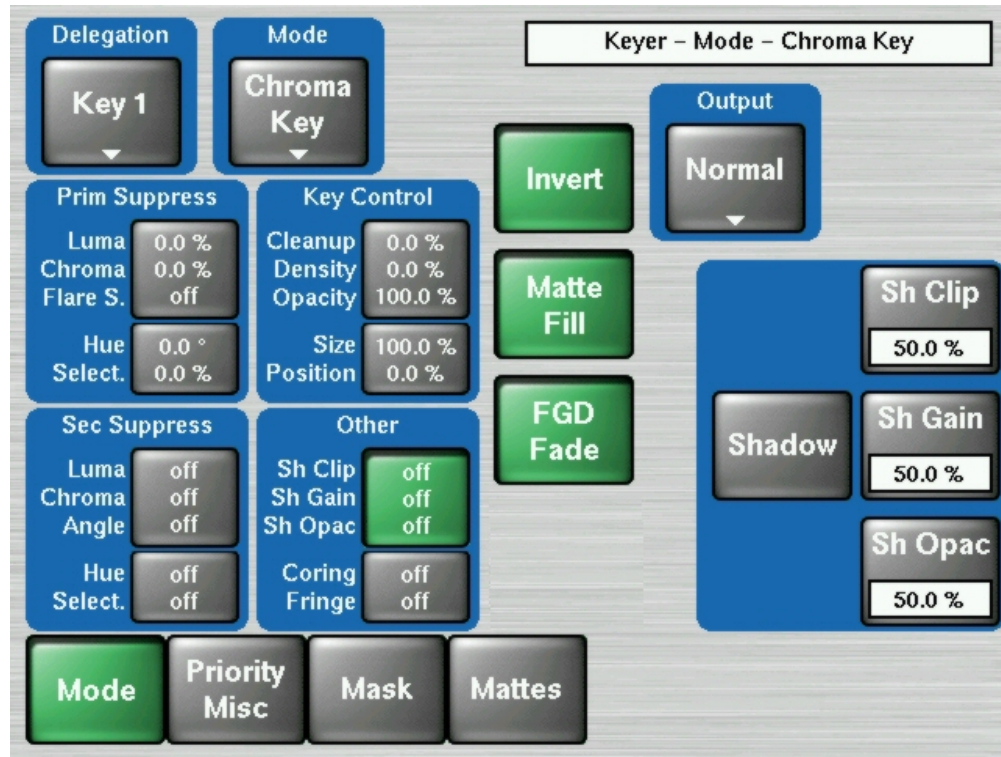


Figure 206 Other Controls Part1, Shadow Clip / Shadow Gain / Shadow Opacity

Coring replaces any pixels in the luminance signal after primary suppression that are below the adjustable threshold with black. This eliminates noise resulting from incomplete suppression. While coring can improve some keys, it can easily be over done. Coring thresholds much above black will affect dark grays that are actually part of the foreground subject, making the chroma key composite look unnatural.

Fringe is used to restore color to the gray portions of the foreground color resulting from secondary suppression adjustments. This control is only active when secondary suppression is on.

Shdw provides controls of shadows that fall on the backing. **Shadow Clip** and **Shadow Gain** allow selecting the range of the luminance portion of the foreground that produces a shadow. **Shadow Density** is an opacity control for the shadow and adjusts how much shadow is added to the background.

6.5 Pattern Mix

The KayakDD system can combine the complex wipe pattern generators (**Wipe1** and **Wipe2**), to create a wide variety of customized wipes.

6.5.1 To Create a Pattern Mix

1. Double press the **Wipe** button in the Transition subpanel on the Main panel. This selects **Wipe** as the next transition type and also opens the Wipes menu with Wipe1 delegated for control.
2. Select the Wipe1 pattern to be used by touching the **Pattern** data pad, and then selecting one of the displayed patterns.
3. Touch the **Mix, Ratio, etc.** data pad.
4. Press the **Trans PVW** button in the Transition subpanel, and move the lever arm part way. This will display the Wipe1 pattern on preview.
5. Set Wipe delegation to Wipe2 and select the desired pattern to be mixed with Wipe1.
6. You can select the type of pattern mix with the Mix type buttons (**Mix**, **NAM +**, **NAM -**). The **NAM** buttons are used for **And** or **Or** pattern mixing.
7. You can also adjust the amount each wipe pattern contributes to the mix with the **Ratio** control digipot. At 50%, each pattern contributes equally. At 25%, the other pattern contributes only 25% to the final pattern.

NOTE!

It is always Wipe1 which is adjusted for pattern mix, i.e. you are mixing Wipe1 with Wipe2. Not Wipe2 with Wipe1.

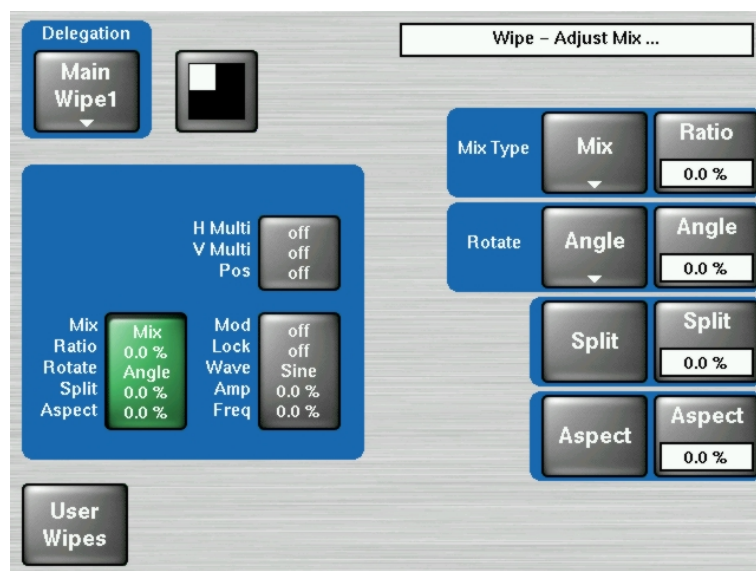


Figure 207 Pattern Mix Menu

7 *Sidepanel Program*

7.1 *Introduction*

The Sidepanel program is a Windows based program, which is used as the menu part of the Thomson Grass Valley DD35/XtenDD control system.

Since the KayakDD is also a member of this control system, the Sidepanel program can be used to enhance the possibilities of the KayakDD switcher. More advanced features, which you normally do not find on a switcher of this size will become available by the use of this program.

The program will run on Windows 95 or higher operating systems.

NOTE!

Since the Sidepanel program is also used for the larger production switchers of the XtenDD series with up to four M/E levels. Some screenshots in this manual show additional items which are not available for the KayakDD system (e.g. more than 16 inputs, more than 10 aux buses).

NOTE!

In some menus of the Sidepanel you may find features which are not yet implemented in the KayakDD system or will not be available at all, due to a different hardware structure

Due to their logic structuring and application of standard elements, the menus are largely self-explaining. The setup is made according to the Graphical User Interfaces (GUI) usual in the PC world. Control of the individual functions is possible with the associated softkeys as well as with a mouse.

The following sections serve as an introduction into the philosophy of menu control, describing only the most important elements. Detailed information concerning the individual menus is contained in the following chapters of the manual.

7.1.1 Sidepanel Glossary

Button	Control element of the graphical user interface which in appearance and function corresponds to a button. Such as on/off-buttons, action buttons, etc.
Control Element	All graphic elements of the user interface that are able to react to user inputs.
Dialog Elements	All graphic elements of the user interface.
Dialog Button	Dialog keys are the 6 buttons to the left of the display. They are used for the selection of other control dialogs. The graphic equivalent on the display is the dialog button.
Menu Button	Buttons on the sidepanel keyboard for the selection of primary control dialogs.
Digipot	Control element for adjusting analog values

7.1.2 What's a Sidepanel Menu

All sidepanel keyboard hardware controls (digipots, function and dialog buttons) have an associated control element within the display. This control element is placed as near as possible to the hardware control. The control elements belonging to the softkeys have two tasks:

- Identify the function of the control
- A mouse click on the control element results in the same action, like pressing button.

The controls belonging to the digipots describe the function of the digipots. Every dialog of this format is called a **menu**. Associated functions are grouped whenever possible. A group of co-operating analog controls is formed by stacking up to four *bar graphs* into one column. If a menu has more than one bar graph column the column must be mapped (delegated) onto the digipots. This delegation is done when the grouped functions are activated (e.g. "Mask On" or "Border On") from this menu or with any other key belonging to the same function group. When an analog control column is delegated, the digipot designators are updated.

The menus are structured using mainly 3D effects to provide a clear and appealing user interface without using many colors. Colors are used to signal events or represent states.

The inner dialog area is used for visualization of parameters and for setting parameters with the mouse. E.g. analog settings are represented by bar graphs inside the inner dialog area.

A definition of the various areas of a control dialog is given in the following diagram:

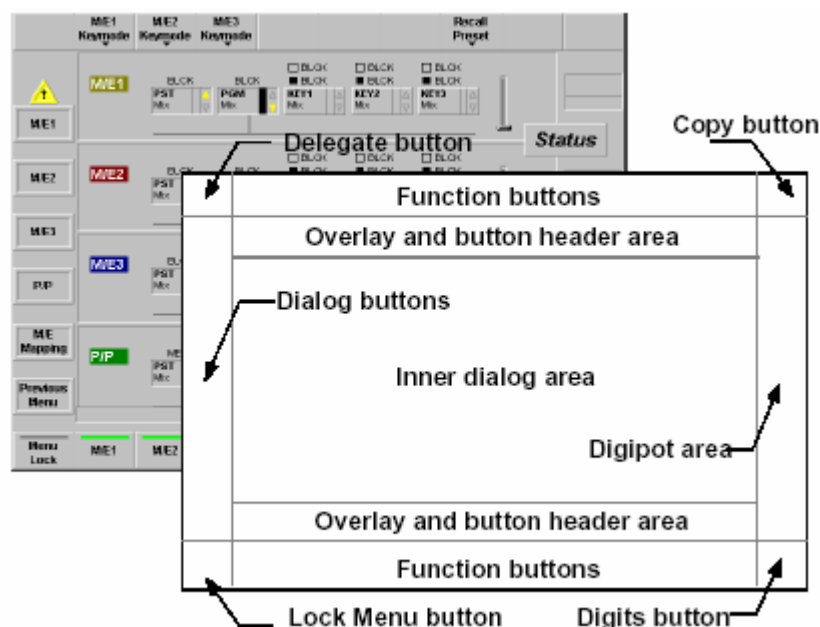


Figure 208 Sidepanel Menu Structure

7.1.3 Color Coding

Red	Attention (as the traffic signboard)
Medium blue	Active bars in bar-graphs
Green	ON state in the case of on/off buttons
Light blue	marking of the active field in listboxes
Yellow	Attention
Light grey	Background
Dark grey	Inscription (inactive), shadow edges
Black	Inscription (active)
White	Bright edges
White	Background of delegated bar graphs

7.1.4 Fixed Softkeys

These buttons have the same function in most menus:

This button opens a button-overlay for direct selection of a similar hardware resource.

7.1.4.1 Delegation



NOTE!

The overlay is displayed in default for approx. 5 seconds. The time can be changed in the menu **Personality / Sidepanel!**

7.1.4.2 Transfer

This button opens a button-overlay for the available transfer modes "**Transfer from**", "**Transfer to**", "**EXCHANGE with**", and "**Undo**".

NOTE!

The overlay is displayed for approx. 5 seconds. The time can be changed in the menu **Personality / Sidepanel!**

Example: Transfer of the wipe settings from M/E1, wipe 1.

Step 1: Select **Transfer**

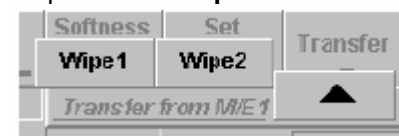
Step 2: Select **From**



Step 3: Select **M/E1**



Step 4: Select **Wipe1**



7.1.4.3 Lock Menu

As long as this button is switched on, the Auto Menu function is inhibited.



7.1.4.4 Digits

This button is an on/off key that controls the numeric readout of analog values. The default setting of this button is a personality preference. A "double click" on this button enables the numeric keypad.



7.1.4.5 Previous Menu

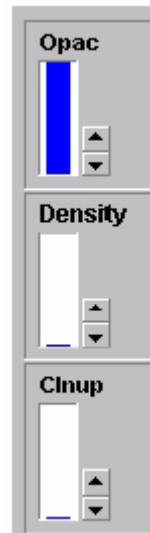
Recall the previous menu. Pushing **Previous Menu** again returns the operator to the menu they just left.



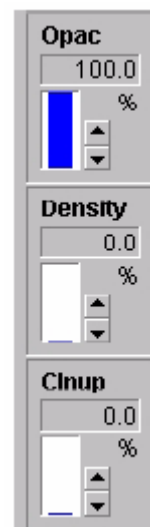
7.1.5 Bar Graphics

A bar graph visualizes parameters with a continuous (analog) range of values. A bar graph is also used to adjust settings with a number of distinct values. It is assumed that the average user associates a potentiometer and not a switch with the setting.

A bar graph has the control state relevant/irrelevant and delegated/nondelegated which is represented optically. A bar graph in the delegated state is represented a blue color. An non-delegated diagram is shown in black and an irrelevant diagram shows only the frame and the text in gray color. The column and the numerical values are not shown.



Bar graph in digit view mode. The bar graph contains the numerical value and the unit of the parameter. A mouse click into this field enables numeric entry via a keyboard connected to the panel.



7.1.6 Digipot Designator

A digipot designator is a control element which is used to describe the digipot function. It is represented in the digipot area on the right side, in each case in the height of the pertinent digipot. The inscription changes if another group is selected.

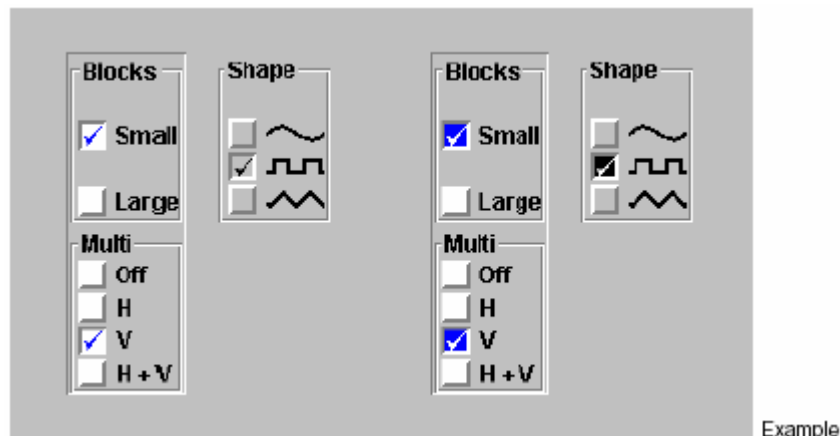
A numeric digipot designator has a small bar to give an overview of range and actual position of the value. This bar cannot be operated with the mouse, but you can enter the numeric value via the keyboard.

If the user turns the digipot slowly, it works in a linear mode. This means that the number of increments is proportional to the rotated speed of the digipot. If the user turns the digipot fast, the function will be nonlinear (e.g. quadratic).



7.1.7 Selection Box

A selection box is a control that shows a number of elements. All elements of the group are inside a frame. In the upper frame the name of the group is shown. One element in the group is always selected. An element has a name or a bitmap as description.



Examples of selection boxes. The left three boxes are the default boxes. The right three boxes are optional (Personality Setup). Blocks and Multi are delegated. The Shape is non-delegated. A selection box can be controlled with the mouse or with a digipot if the box is delegated. When the user clicks to an unselected element the element is now selected. With the digipot the selection can moved up and down.

7.1.8 List Boxes and Index Cards

Listboxes are used to display and change lists of values. Most setup menus will have listboxes. A menu that uses a listbox must have cursor keys, a "Click" key **Modify** and a select key **OK**. The digipots can also be used for listbox cursor positioning (digipot 0 for Up/Down and digipot 1 for Right/Left). Also the mouse can be used to position the cursor. The cursor follows the mouse cursor. The softkeys for cursor positioning do autorepeat when held down.

Sliderbar: If the listbox has more entries than lines, the sliderbar can be used to position the visible section.

Every listbox has a memory for the actual listbox cursor position when the user leaves the listbox or the menu. If the user selects the menu or listbox later the list box cursor appears at the last stored position. Menus with more than one listbox have only one set of control buttons. These buttons and the digipots will be delegated (with a cursor button) to the selected listbox.



Figure 209 Sidepanel – List Box

7.1.9 Typewriter

When the user is requested to make a character input, a keyboard with typewriter layout (style US English) can be selected appear in the dialog window.

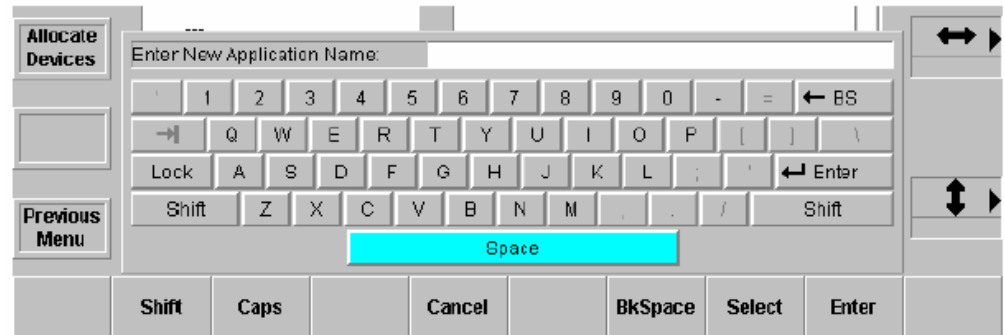


Figure 210 Sidepanel – Typewriter

There are two types of input, normal input and password input. If a password is requested, for each typed character, a star appears. The operation of the typewriter is possible with the following controls:

- Keyboard that is connected to the side panel PC
- Mouse or other pointing devices
- Digipot control: The left-right digipot changes the cursor position in a horizontal direction. When the cursor reaches the last button in the row it jumps to the first button in the next row. When the cursor reaches the first button in a row it jumps to the last button in the previous row. The top-down digipot changes the cursor in a vertical direction. When the cursor reaches the last row it jumps to the first row in the next column. When the cursor reaches the first row it jumps to the last row in the previous column.
- Numeric keypad (only for numbers)

The shift key operates like the 2nd button of a pocket calculator. If the shift key is pressed the next character is a capital letter or a special character (~!@#\$%^&*()_+{}|:~<>?) respectively. The label on the button changes. If the shift lock function is active, the corresponding button will be represented as a pressed button.

Numeric keypad of the control panel will now be activated in the following cases:

- Click on the EditField of a Slider
- Click on the EditField of a Digipot, which is connected to a slider

Double-clicking on the digit button modifies the last Slider that was modified with the mouse or side panel digipot.

7.1.10 Using a Mouse

The menu can also be controlled by means of a mouse. Doing so, all functions contained in the menu are controllable with the mouse, thus enabling an operation without softkeys and digipots. That means, operation is possible from a normal PC without special hardware.

The functions are initiated by clicking or double-clicking with the left mouse button on the individual elements in the menu.

Clicking with the right mouse button calls a pop-up menu which enables a change into the other menu groups. This function replaces the menu buttons arranged to the left of the display.



7.1.11 Dialog Title

A dialog title is presented inside the dialog area. It is edged by a graphic elevation. The hardware resources addressed by the control dialog as well as the addressed area come from the selection of this area. Example: hardware resource **M/E1**, area **Main** menu. The specified M/E text (e.g. **M/E1**) has the M/E color coding. Clicking the mouse into the header selects the menu for the next associated hardware resource. For example, the control dialog of **M/E1** then changes to **M/E2**.



7.1.12 Menu Groups and Hierarchy

The root menu is the **Status** menu. From **Status** the top level menus of each group can be selected (when clicking the right mouse button) via the pop-up menu or pressing the respective menu buttons.

Menu group	Top level menu	Sub-menus
Startup	Startup	
Status	Status	Status P/P
M/E	M/E	Main Auto Times Color Background
Key	not supported in KayakDD	
Wipe	not supported in KayakDD	
Remote	Remote	Remote GP-I/O P-Bus
Montage Proc	not supported in KayakDD	
Color Bgnd	Color BGD	Color BGD 1, 2, 3
Correction	Correction	Aux
Install	Install	Main E-Box Panel System Diagnose
Configuration	Config	Config E-Box Panel Allocate Panel
Video Store	not supported in KayakDD	
TiM/E Memo_	TiM/E Memo	Select Define
DVE	DVE	DVE Extern DPM Main DPM Edit
Media Player	M/E	MP Status MP Clips RamRec Transfer Image Converter
Personality	Personality	Main
Auxiliary	Aux	Main

In some cases it is necessary for convenient and fast operation that a menu in the context of an object provides a "link" into a menu of another object.

Example: The Paint Store Menu has a link to the Wipe Main Menu if a pattern is selected as Paint Store source. The button that activates the link has the look of a dialog button . It shows the name of the called menu. It is located in the function buttons area not in the dialog button area. Once the link is activated the **Previous Menu** button changes to **Return** to provide a direct return path into the "calling" menu. **Return** is changed back into **Previous Menu** when:

1. the **Return** is done
2. the context of the destination menu's object is left.

Example: Paint Store has link into M/E x Wipe1 Main, the link is followed. **Return** is valid as long as the user is in menus of that wipe generator. If another wipe generator or another top level menu is selected **Return** is discarded and the button changes to **Previous Menu**.

7.2 Startup Menu

After program start, the **Startup** menu is shortly called with the KayakDD logo and then automatically the menu available last with all selected parameters.

With initial startup, the **Startup** menu is called in order to enable selection of the main frame and establishing the connection.



Figure 211 Sidepanel – Start Menu

The run-up bitmap (big one DD35 logo) and the background bitmap in the Startup menu can be replaced by user defined ones. During run-up, the system is looking for the files

- c:\programme\dd35\bin\logo.bmp and
- c:\programme\dd35\bin\logo2.bmp

If not available, the internal DD35 logo will be displayed. The file logo2.bmp is optionally. If not available, the logo.bmp is used for both purposes.

7.2.1 Selection of the Mainframe

Actuating the **E-Box** button calls a listbox in which the main frames connected to the mains are listed with IP Net Address. After selection of a main frame, the **Connect** and **Disconn** buttons are activated.

A corresponding selection connects or disconnects the connection.

E-Boxes found:		
XtenDD-165	192.168.0.165	▲
XtenDD-210	192.168.0.210	
XtenDD-220	192.168.0.220	
XtenDD-236	192.168.0.236	
XtenDD-61	192.168.0.61	
XtenDD-70	192.168.0.70	▼

7.2.2 Selection of a Attached Panel

Actuating the **Panel** button calls a listbox in which the switcher panels connected to the mains are listed with IP Net Address. After selection of a panel, the **Attach** and **Detach** buttons are activated.

A corresponding selection connects or disconnects the connection.

Panels found:		
DD35-158	192.168.0.158	▲
DD35-163	192.168.0.163	
DD35-168	192.168.0.168	
DD35-213	192.168.0.213	
DD35-239	192.168.0.239	
DD35-73	192.168.0.73	▼

7.2.3 Close / Minimize / Shut Down

- **Close**
A click (button or mouse) closes the XtenDD application.
- **Minimize**
A click (button or mouse) minimizes the XtenDD GUI on the screen to the Windows95 Task bar. A minimized state can be restored to its original size by pressing any key
- **Shut Down**
A double-click (button or mouse) closes the XtenDD application and shut down the control panel PC.

7.3 Status Menu

The root menu of the switcher is the **Status** menu. From **Status** the top level menus of other group can be selected (when clicking the right mouse button) via the pop-up menu or pressing the respective menu buttons.

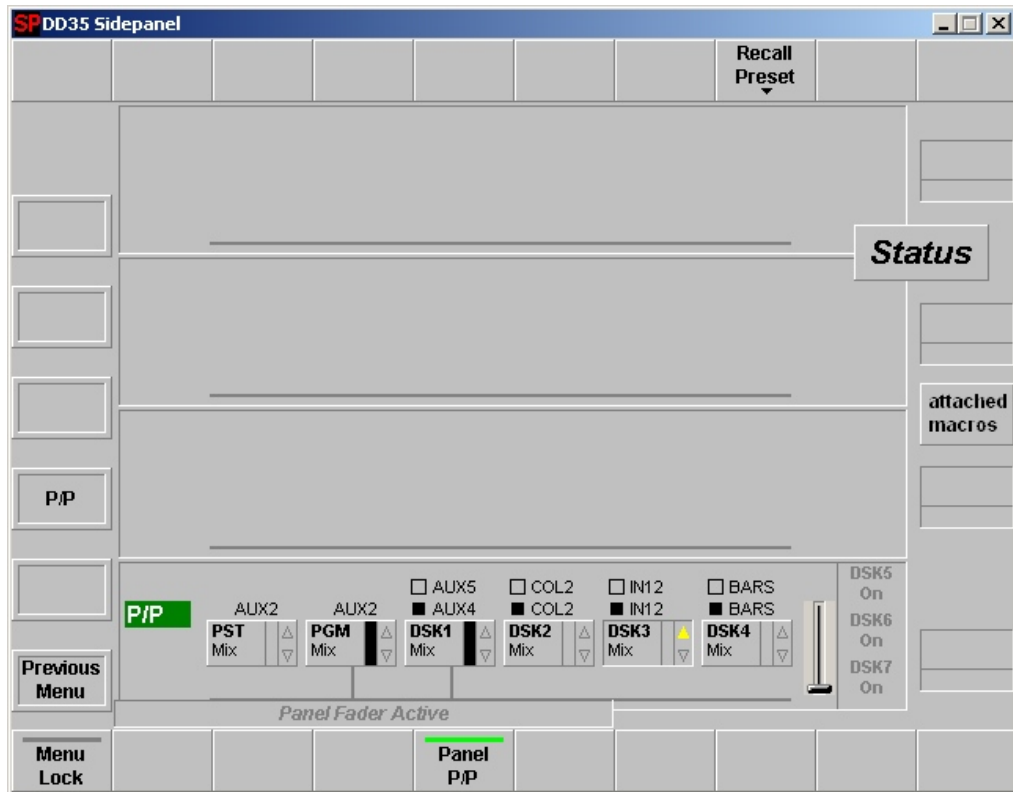


Figure 212 Sidepanel – Status Menu

7.3.1 Selecting the M/E Main Menus

M/E1 - M/E2 - M/E3- P/P

Press the associated dialog button to select the associated M/E Main menu which serves to modify the switcher parameters. In KayakDD-1 only PP, KayakDD-2: ME-1 and PP is available.

7.3.2 Enable / Disable the Faders

Fader Active: M/E1, M/E2 M/E3, P/P

Press the associated button to enable or disable the panel fader of the individual mixing levels and the menu fader in the M/E Main menus. The active status is displayed in the button. In KayakDD only PP is available.

7.3.3 User Definable Presets

User definable preset of the mainframe operational state is possible for a single M/E or the complete switcher. For a recall of the complete switcher preset select the Status menu. A single switcher preset can be recalled in the M/Ex Main menu.

Refer to the Install E-Box menu for saving the preset data.

- **Recall Preset**
The following presets can be recalled:



- **Factory Preset**
Recall the factory preset.
- **Operation Preset**
Recall the user defined operation preset. See section Install E-Box to store the user defined operation preset.
- **Undo**
Recall the last user settings.

7.3.4 Attached Macros

This menu can be accessed in two ways:

- via Config / Attached Macros menu
- by clicking to “attached macros” button,



which is visible in all menus at the right side between the middle digipots. This button is only visible when there is at least one macro attachment. The button is gray or green, depending on the settings in the menu *Personality / Panel / MaKE Memo Attachment Playmode*.

7.4 M/E Menu

7.4.1 M/E Main Menu

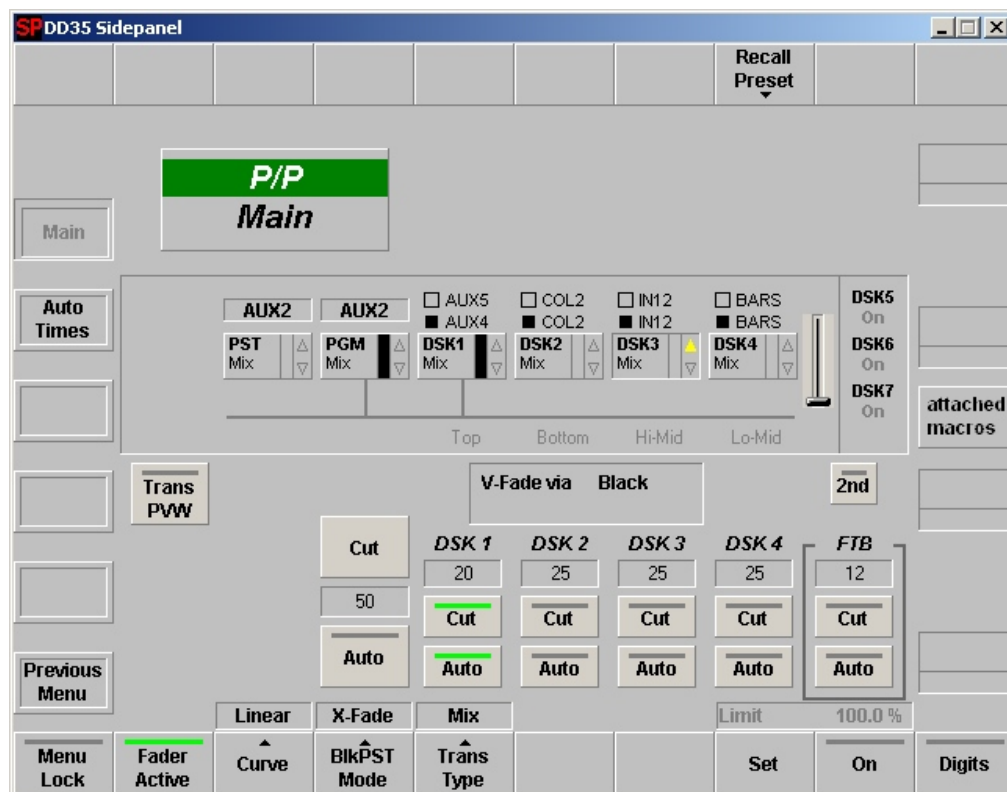


Figure 213 Sidepanel – M/E Main Menu

The inner dialog area shows the status of the respective M/E stage. All transition functions (Cut, Auto, Trans PVW, Trans Duration, ...) can be controlled by trackball or mouse.

7.4.1.1 Select Trans Duration Time

- Click on Duration field
- Enter the desired value using the numeric keypad



- Click E (enter) or C (clear)

7.4.1.2 Dialog Buttons

- **Auto Times**
For details refer to section **Auto Times Menu**.
- **Previous Menu**
Return to the previous menu. For details refer to section **Introduction**.
- **Recall Preset**
Recall the single M/E Preset



- **Factory Preset**
Recall the factory preset
- **Operation Preset**
Recall the user defined operation preset. See below to store the user defined operation preset.

- **All stop**

Press the associated button to stop or reset the following functions:

- stops all ongoing auto transitions
- sets FTB to inactive (100%)
- sets transition type to MIX
- moves BGND transition to start position
- removes all keyers
- set Next Transition BGND
- resets Next Transition for all other components.

This command does not

- influence matrix crosspoints
- stop TiM/E timeline play or TiM/E snapshot dissolve.

- **Menu Lock**

For details refer to section Introduction.

- **Fader Active**

Press the associated function button to enable or disable the fader of the individual mixing levels. The active status is displayed in the button.

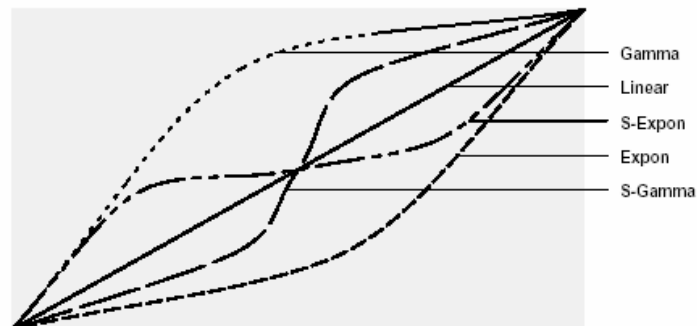
- **Curve**

Press the associated function button to select the transition characteristics for the faders.



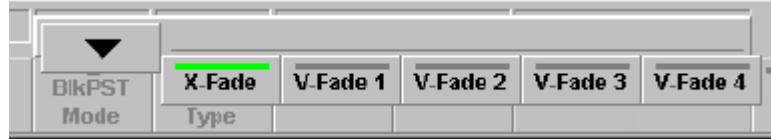
- Linear transition on the basis of a linear function
- Expon transition on the basis of an exponential function
- Gamma transition on the basis of a gamma function
- S-Expon transition on the basis of an exponential gamma function
- S-Gamma transition on the basis of a gamma exponential function

The selected curve function will be displayed in the button header area.



- **BikPSTMode**

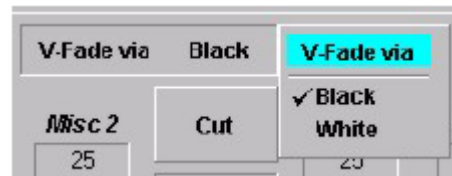
The BikPST Mode button permits selection of different modes of fading:
To select a fading mode, activate the button and then select a mode with the overlay button X-Fade, V-Fade1, V-Fade2, V-Fade3 or V-Fade4.



NOTE!

Defaults back to X fade after transition is finished.

For the V-Fade two modes of operation are selectable by clicking the listbox:



- **Trans Type**

The Trans Type button permits selection of different types of transitions:
To select a transition type, activate the button and then select a transition type with the overlay button Undef, Mix, Add, Wipe1, Wipe2 or DVE.



The selected transition type is displayed in the button header area.

NOTE!

Please note that you can only change the transition type when the transition is finished, i.e. when an automatic transition has been completed or the fader is in end position.

- **Limit Set**

The Limit set and Limit on buttons serve to create reproducible partial transitions. This mode is possible with all types of transitions. Limit set permits storing the desired value set with the fader.

- **Limit On**

Limit on enables the mode. Any transition with Cut or Auto and any manual transition with the fader is only executed up to the value previously defined with Limit set. If the transition is made with the fader, the yellow arrow to the left of the fader does not change the direction when the fader is moved to its end position, thus indicating that the transition is not completed. If Limit on is

switched off at the point defined by Limit set, a jerk free transition to the next contribution can be made with the fader. The remaining transition length is then stretched to the full fader path.

7.4.2 Auto Times Menu

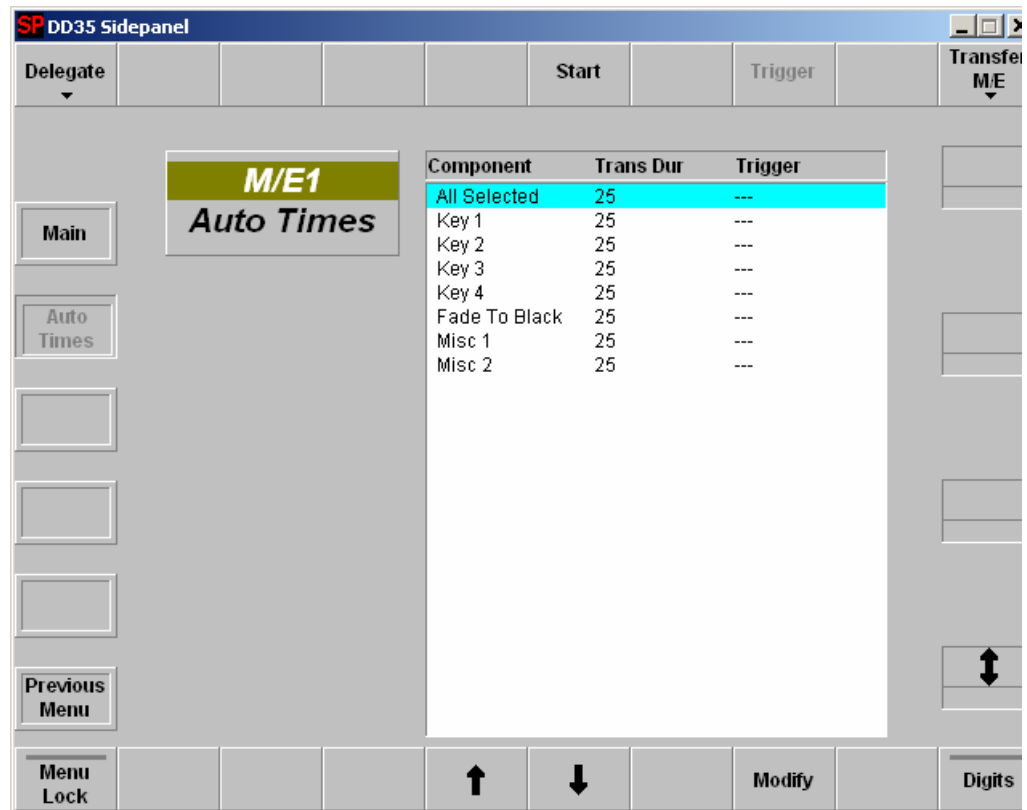


Figure 214 Sidepanel – Auto Times Menu M/E

The menu permits setting the auto transition times.

7.4.2.1 Dialog Buttons

- **Main**
Selecting M/E Main menu.
- **Previous Menu**
Return to the previous menu. For details refer to section Introduction.

7.4.2.2 **Function Buttons**

- **Start**
Starts the transition selected in the list box.
- **Trigger**
Press the associated function button to start the Auto times manually. The button is only active when a GPI in the Trigger column is pre-selected.
- **Modify**
Selecting the button displays the numeric keypad to enter the auto transition times of the selected component. Only numbers are valid entries.



- **Digits**
For details refer to section Introduction.

7.4.2.3 **Auto Time P/P**

Components in the P/P mixing level:

<div><div>P/P</div><div>Auto Times</div></div>	Component	Trans Dur	Trigger
	All Selected	25	---
	DSK 1	25	---
	DSK 2	25	---
	DSK 3	25	---
	DSK 4	25	---
	Fade To Black	25	---
	DSK 5	25	---
	DSK 6	25	---
	DSK 7	25	---
	Misc 1	25	---
	Misc 2	25	---

Figure 215 Sidepanel – Auto Times Menu P/P

7.4.3 Color Background Menu

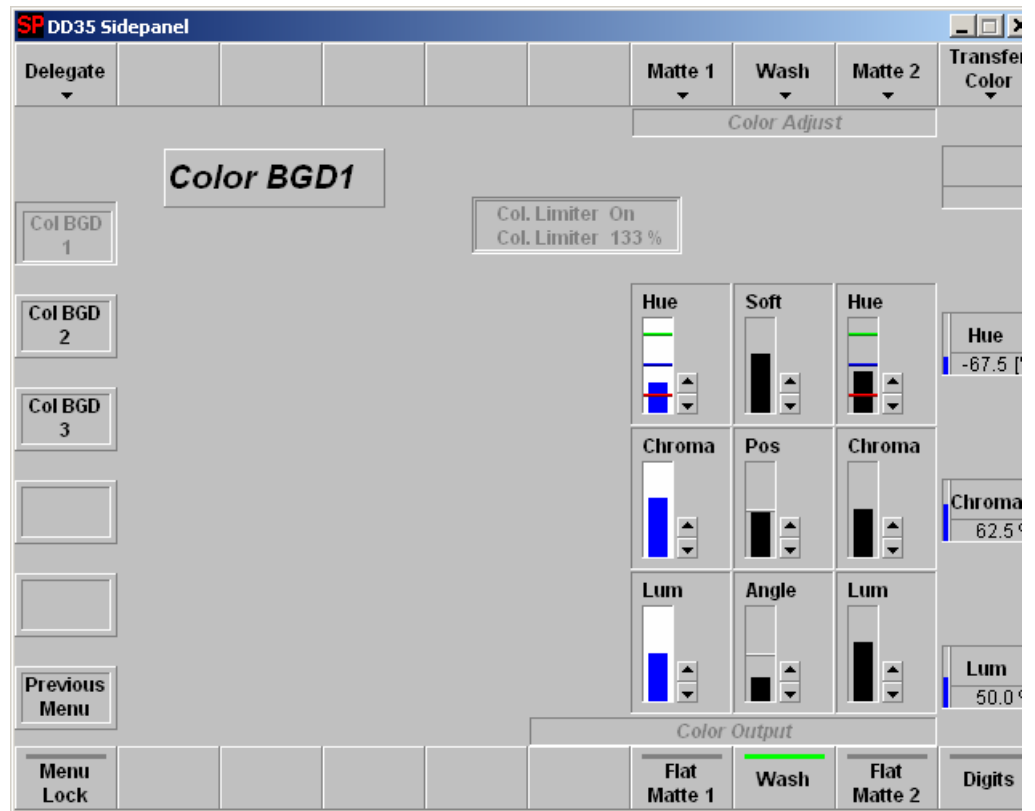


Figure 216 Sidepanel – Color Background Menu

7.4.3.1 Function Buttons

- **Delegate**

For details refer to section Introduction.



- **Matte 1 / Matte 2**

The Matte 1 (Matte 2) button delegates the digipots so that the desired colors can be adjusted. There are seven preadjusted matte colors selectable.



The Hue control serves to adjust the color. The Chroma control serves to adjust the color saturation (chrominance). The Luminance control serves to adjust the desired brightness of the color.

NOTE!

Please note that certain combinations of chrominance and luminance values will cause overlevels and inadmissible colors. For this reason, an automatic can be switched on to control limits the chrominance for defined luminance values. You can easily check this by setting the Chroma control to maximum and then turning the Luminance control slowly to maximum; the chrominance will be reduced with increasing luminance values.

If the automatic control is switched off an illegal sign indicates a wrong adjustment.

- **Wash**

The Wash button serves to reset the wash to: Angle-Vert, Pos-Mid and Soft-Min and delegates the digipots to the wash parameters Angle, Pos, Soft.



- **Flat Matte 1**
Flat matte 1 selects matte 1 as output.
- **Flat Matte 2**
Flat matte 2 selects matte 2 as output.
- **Wash**
Selecting Wash serves to select a matte that is composed of a color wash between matte 1 and matte 2. If only the wash button lights up, it is possible to change the color wash individually with the Softness, Position, and Angle controls. The Softness control permits adjusting the width of the transition between the two colors. The Position control serves to shift the position of the transition. With the Angle control, the transition angle can be rotated. Select Matte 1 or Matte 2 if you wish to adjust the matte with the Hue, Chroma, and Luminance controls. Select Wash (upper row) to adjust Softness, Position, and Angle.

7.5 Remote Menu

7.5.1 Main Menu

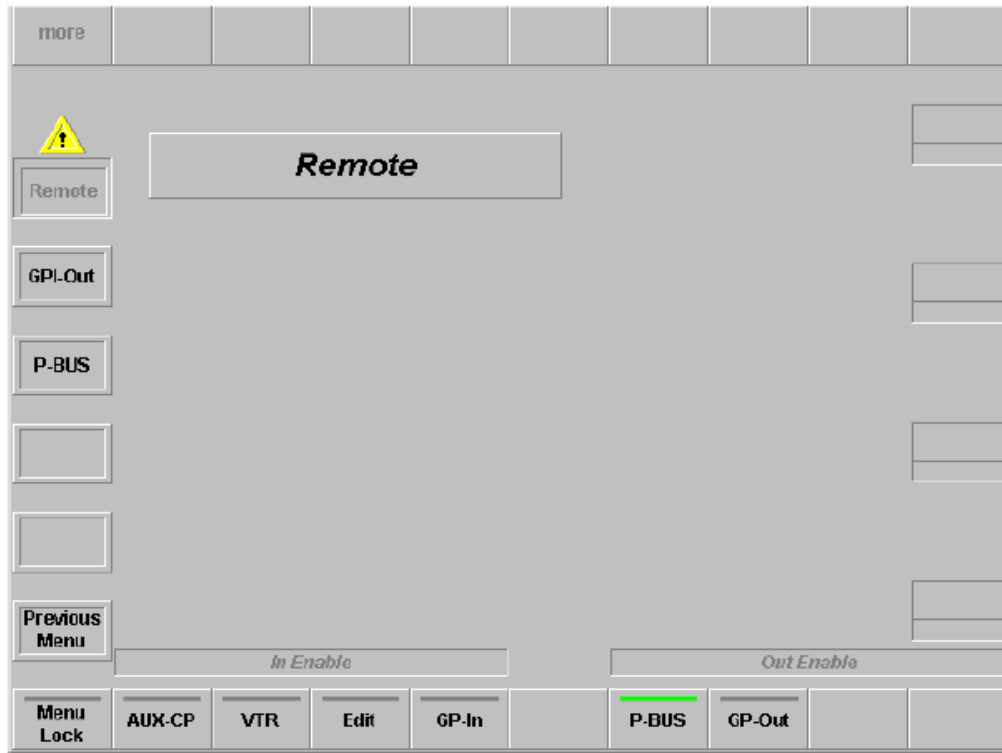


Figure 217 Sidepanel – Remote Menu

7.5.1.1 Dialog Buttons

- **GPI-Out**
Selecting GPI-Out menu
- **P-Bus**
Selecting P-Bus (Periveral Bus) menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.
- **Menu Lock**
For details refer to section *Introduction*.
- **In Enable AUX CP**
Enables Aux Control Panels

- **In Enable VTR**
Enables the VTR control
- **In Enable Edit**
Enables Editor control.
- **In Enable GP In**
Enables GPI inputs
- **Out Enable P-Bus**
Enables Editor control.
- **Out Enable GP Out**
Enables GPI outputs

7.5.2 GPI-Out Menu

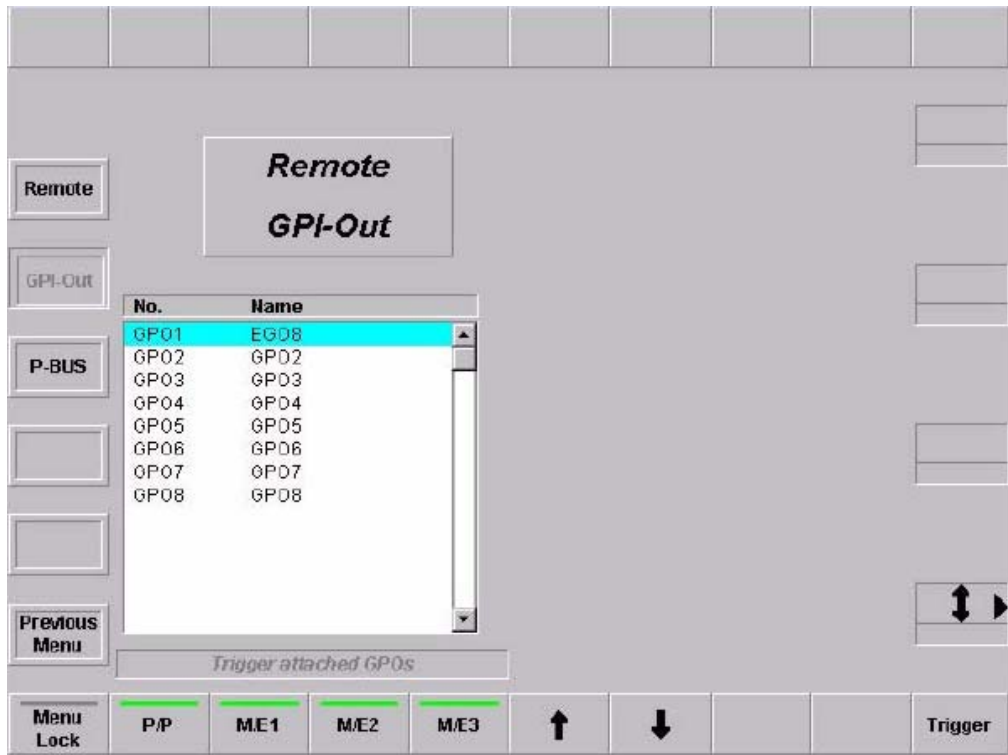


Figure 218 Sidepanel – GPI Menu

7.5.2.1 Dialog Buttons

- **Remote**
Return to the Remote main menu.
- **P-BUS**
Selecting P-Bus menu
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.5.2.2 Function Buttons

- **Menu Lock**
For details refer to section Introduction.
- **Trigger attached GPOs**
 - P/P
 - M/E1 ... 3

In preparation
- **Cursor Up/Down**
Moving the bar in the list box and select a GPO channels 1 to 32
- **Trigger**
Set a manual trigger

7.5.3 Remote P-Bus

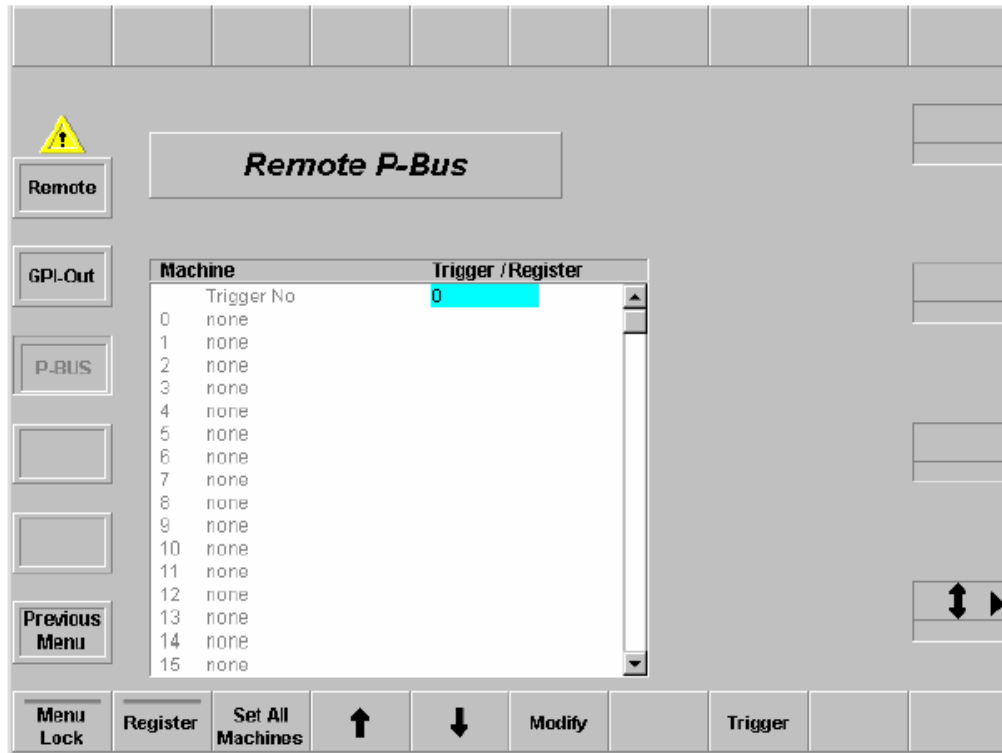


Figure 219 Sidepanel – Remote P-Bus Menu

7.5.3.1 Dialog Buttons

- **Remote**
Return to the Remote main menu.
- **GPI Out**
Selecting GPI-In menu. Not yet implemented.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.5.3.2 Function Buttons

- **Remote P-Bus / Trigger**

The Remote / P_Bus enables to manually trigger with Trigger the machines defined in the Install / E-Box / P-Bus menu. At present, only 1 trigger can be output on the P-Bus, which then reaches all machines for which in this case a trigger is adjusted. In the 1st line, the trigger number is present (can be used, but must not). In the other lines, this trigger number is adjusted for the respective machines.

The popup of each machine provides the following selection possibilities:

- no Command:** this machine does not get any trigger
- default Command:** this machine gets the trigger number being in the 1st line
- all other lines:** here, each trigger is specified with the name being provided for this machine. A selection in this area also changes the general trigger number in the 1st line which then is applicable for all machines.

It is only possible to trigger those machines which are activated in the Install / Pbus menu. The trigger will then be performed by the equal-named button. It then reaches all machines with a trigger name listed below.

Machine		Trigger J Reg	Trigger
0	Trigger No	3	0
1	VTR active		1
2	DWE		2
3	PROFILE		3
4	no ne		4
5	no ne		5
6	no ne		6
7	no ne		7
8	no ne		8
9	no ne		9
10	no ne		10
11	no ne		11
12	no ne		12
13	no ne		13
14	no ne		14
15	no ne		15

- **Remote P-Bus / Register**

Sub-dialog of the trigger. Register are device-specific states. These registers can be read out or written in just as the trigger for a defined number of machines. The concerned machines are indicated in the field Trigger/Register where only Recall / No Recall can be selected.

Machine	Trigger / Register
Register No	3
0 eee	recall
1 wer	
2 none	
3 none	
4 none	
5 none	
6 none	
7 none	
8 none	
9 none	
10 none	
11 none	
12 none	
13 none	
14 none	
15 none	

Storing or recalling is performed with the buttons Save Register and Recall Register.

7.6 DVE Menus

7.6.1 DVE External

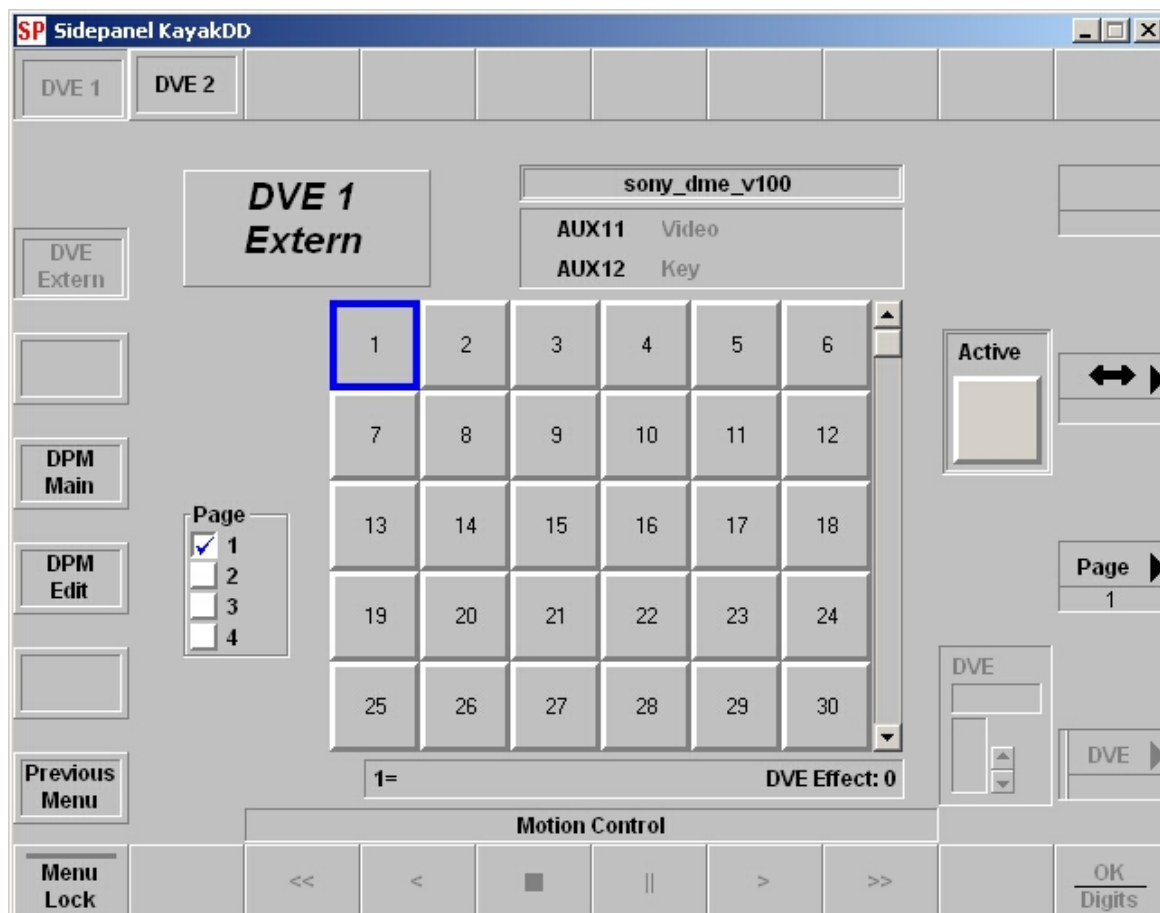


Figure 220 Sidepanel – External DVE Menu

7.6.1.1 Dialog Buttons

- **DVE Extern**
Menu serves to control an external DVE system.
- **DPM Main**
Main menu page to control the internal iDPM system.
- **DPM Edit Menu**
Edit menu page to create new effects.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.6.1.2 Function Buttons

- **Menu Lock**

For details refer to section *Introduction*.

- **DVE1 / DVE2**

Selecting the channel of the external DVE.

DVE effects can be selected either by positioning the blue cursor box with the digipots or by clicking with the mouse on the desired effect and confirm with OK. The selected effect can be used as DVE transition or the DVE can be controlled by the Motion Controls in this menu. With the digipot DVE the DVE can be positioned to a fixed point in the timeline.

- **Motion Control**

< < Fast rewind

< Rewind

■ Stop

|| Pause

> Play

> > Fast forward

- **OK / Digits**

For details refer to section *Introduction*.

7.6.2 DPM Main

The Kayak HD system supports one DPM channel per keyer, that means a Kayak HD-1 may have up to 4 DPM channels, a Kayak HD-2 up to 8 DPM channels. For units currently shipping the DPM channel for the first keyer per ME-bank is standard, the remaining 3 channels per ME are options.

The menu allows to select up to 100 (0 to 99) and start the effects.

The parameters of the Digital Picture Manipulators are not stored as part of the E-MEM system. They are treated per ME-bank like external DVE channels with a separate timeline system with 100 registers. That means the switcher can recall independently extra DPM effects per ME while running an E-MEM timeline.

To offer even more flexibility the user can define per register, which of the 4 channels should be affected. E.g. register 1 could only include the DPM channel of keyer 1 running an endless loop to spin a logo while the user is able to recall independently other registers containing only channel 3 + 4 displaying differently sized boxes.

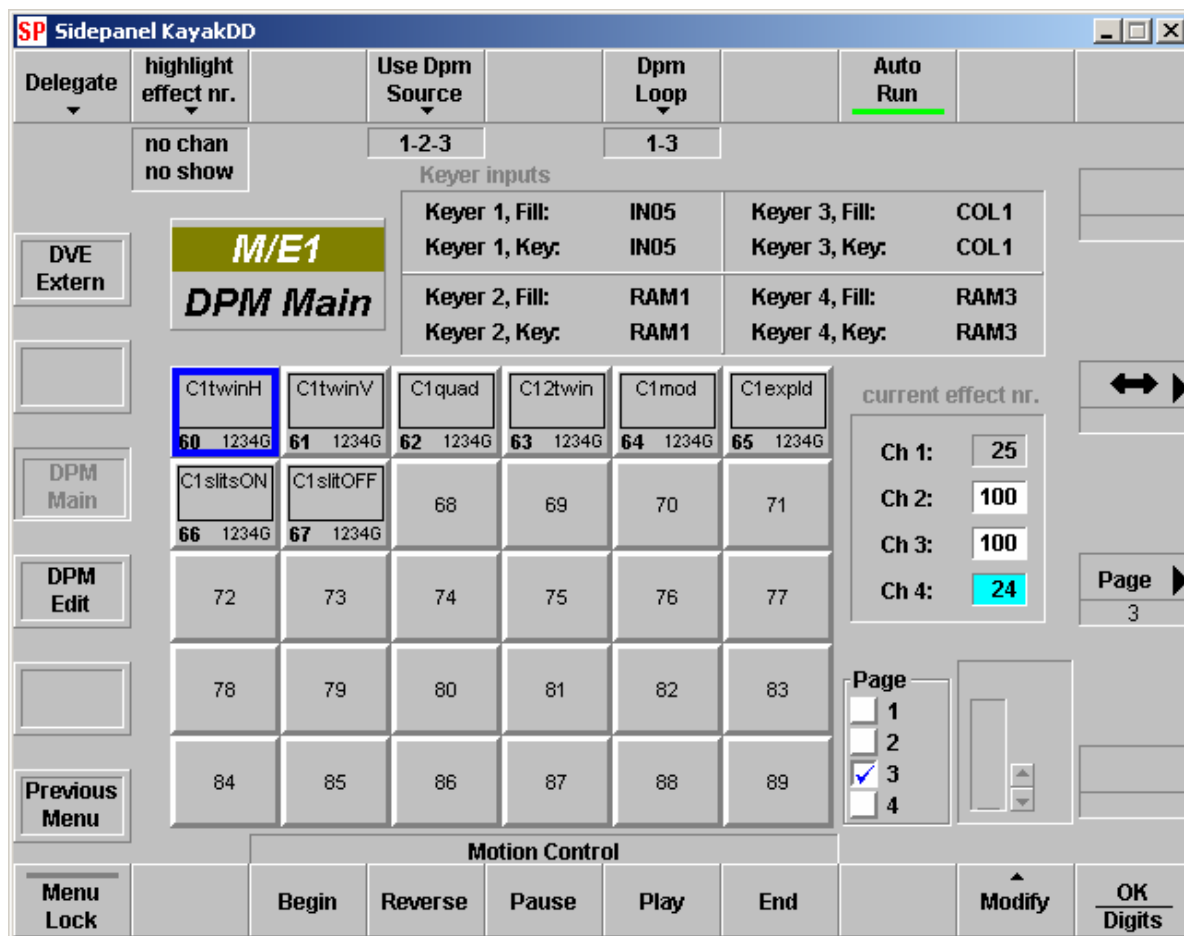


Figure 221 Sidepanel – DPM Main Menu

7.6.2.1 Inner Window

The inner window consists of several sections:

- Inputs Selection Keyer/Fill,
- Effect selection (6 x 5 buttons per page),
- Page selection

7.6.2.1.1 Input Selection

Input selection for the 4 channels, click on the according fields for source selection.

7.6.2.1.2 Effect Selection

30 buttons for DPM effect selection (in total 100 effects on 4 pages). In the bottom part per button you find an indication of the channels used in the according effect.

To select an effect, first preselect it (dark blue border) then press **OK** – or double click an effect directly. The selected effect (light blue background) can be controlled by the motion control buttons or by the **DPM** digipot on the right side.

The effect selection can be learned in a macro. Since you can run up to four DPM effects simultaneously, learning motion control commands in macros has to be done carefully.

Pressing the “Play” button while learning a macro, this macro will record a play command for the first channel in the selected effect.

Example:

If the effect contains channel 2, 3, 4 – the macro will record the play command for channel 2. This macro can be used to play any effect containing at least channel 2, because a play command for one of the used channels will play all used channels. So 4 macros is enough to play all effects.

7.6.2.1.3 Current Effect Number

In this section you find an indication of the selected effect per channel. This can differ from the last recalled effect, since an effect recall only loads the channels included in the DPM effect.

7.6.2.2 Dialog Buttons

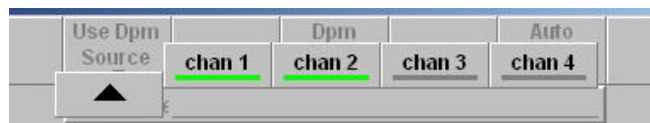
- **DVE Extern**
Menu serves to control an external DVE system.
- **DPM Edit Menu**
Edit menu page to create new effects or edit existing ones.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.6.2.3 Function Buttons

- **Delegate**
Delegating the menu to an M/E or P/P stage of the switcher.
- **Highlight Effect No.**
This feature is only a help to get a quick overview, which channel is used in which effect. This is only important for customers using the DPM as a multiple DVE! The overlay row is special and consists of two parts, which have to be selected independently:

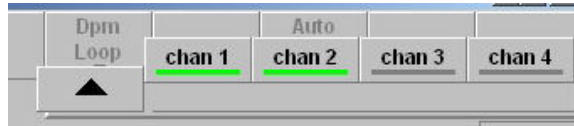
no show	No highlighting
1 incl.	Highlight all effects which contain at least one of the selected channels.
all incl.	Highlight all effects which contain all of the selected channels.
exact	Highlight all effects which contain exactly the selected channels.
chan 1	Toggle selection channel 1: "-- -- --" is off, "chan 1" is on.
chan 2	Toggle selection channel 2: "-- -- --" is off, "chan 2" is on.
chan 3	Toggle selection channel 3: "-- -- --" is off, "chan 3" is on.
chan 4	Toggle selection channel 4: "-- -- --" is off, "chan 4" is on.
global	Toggle selection global: "-- -- --" is off, "global" is on.

- **Use DPM Source**



DPM Channel selection: You can select per local channel whether this channel should be affected by the global channel. Click the buttons with the mouse to select / deselect.

- **DPM Loop**



Activates the DPM function for the according keyer, that means when on, the DPM is looped into the signal path.

- **Auto Run**

When Auto Run is on a recall of an DPM effect will automatically run the effect. When Auto Run is off, the run has to be triggered either in the Show Timeline menu by pressing "Play" or by pressing the cut button in the Effects area again while the section is delegated to DPM control.

The **Auto Run** button is also used when a DPM effect is recalled by an **E-MEM**. When "on", a keyframe containing **DPM Eff. No** in the Define Memo will trigger an immediate run of the relevant DPM effect. (Define memo is set in the E-MEM define memo menu.) When "off", a trigger has to be set to run the effect.

7.6.3 DPM Edit Menu

7.6.3.1 General Control Principles of the Index Cards

The edit control consists of 2 rows of 8 index cards.

- You can toggle between the two rows of 8 with the arrow button (top row left).
- To select an index card press the according button in the top row of the GUI panel.

Most index cards have several pages (functions) with up to 4 controls.

- You can toggle through the functions with the function select button (top row right of the GUI).
- The up to 4 controls per page can be controlled by the 4 digipots on the right side.
- Some controls can also be set with numeric values or using the mouse cursor (see below).

7.6.3.2 Cursor Modes

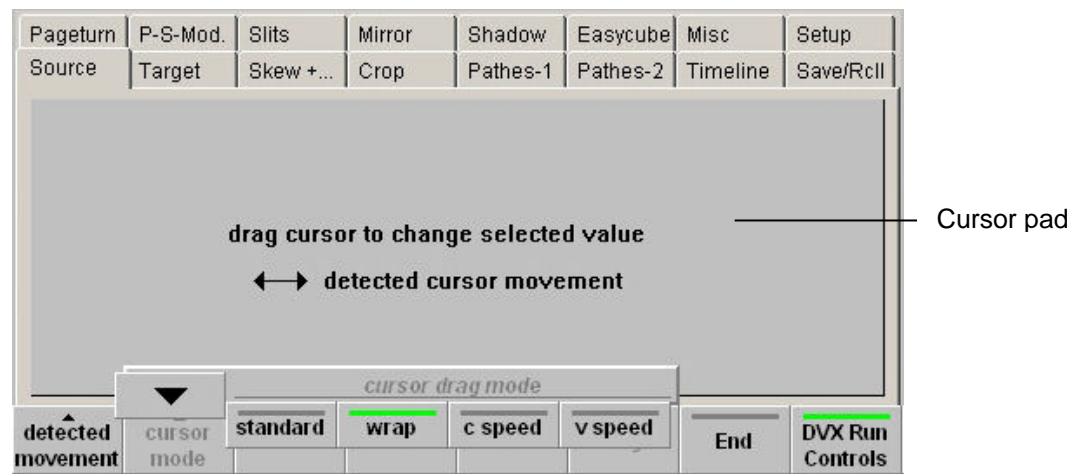


Figure 222 Sidepanel – Cursor Modes

Data entry of the parameters are possible by clicking into the respective parameter field (a numeric key pad appears) or by cursor movement inside the cursor pad. Different cursor modes are selectable:

7.6.3.2.1 Standard

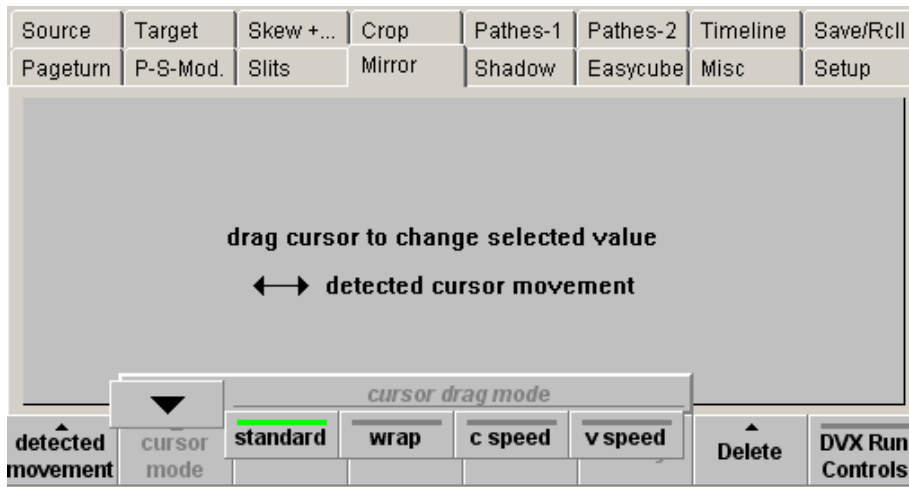


Figure 223 Sidepanel – Cursor Mode Standard

Right click and drag your mouse to change analog values.

7.6.3.2.2 Wrap

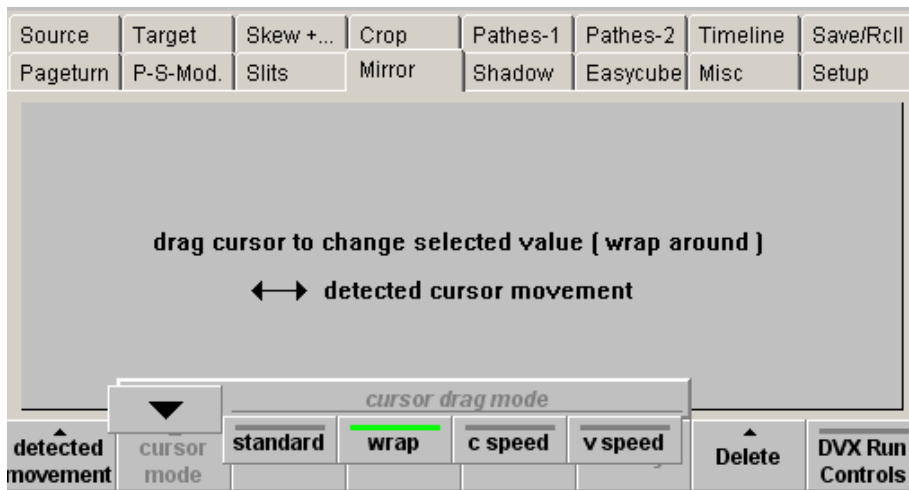


Figure 224 Sidepanel – Cursor Mode Wrap

Right click and drag your mouse to change analog values. When the mouse reaches the end of the detection area it is automatically positioned to the opposite border (wrap around). This mode is recommended for mouse control.

7.6.3.2.3 C Speed

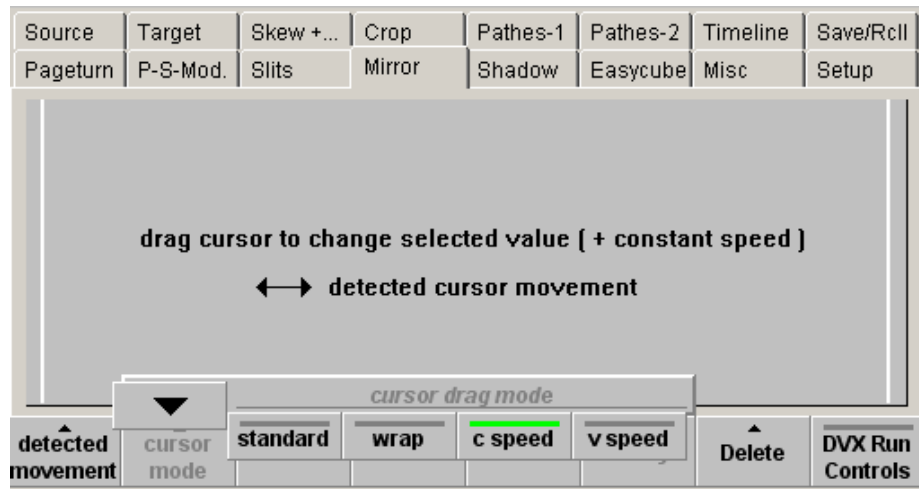


Figure 225 Sidepanel – Cursor Mode C Speed

Inside the white lines same behavior as standard mode. When the mouse is outside the white border the value will change with a constant speed. This mode is recommended for touch screen control.

7.6.3.2.4 V Speed

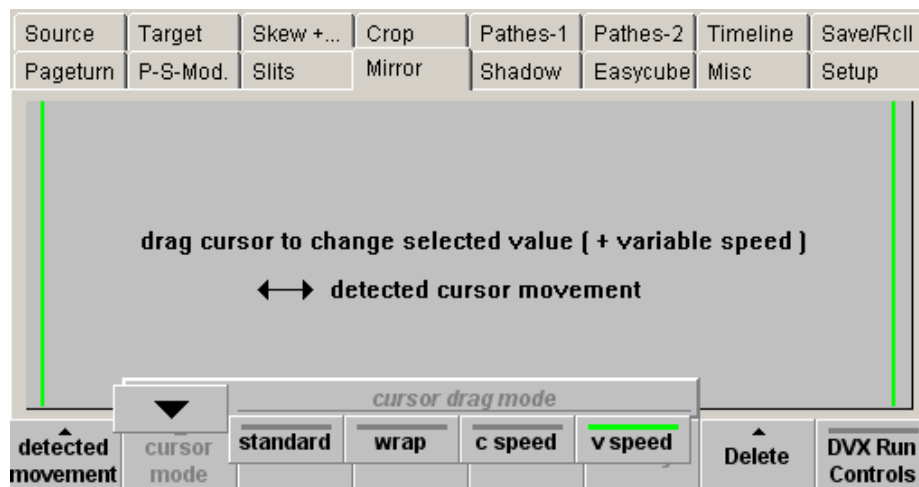


Figure 226 Sidepanel – Cursor Mode V Speed

Inside the green lines same behavior as standard mode. When the mouse is outside the green border the value will change with a variable speed. The speed is high at the top and low at the bottom. This mode is recommended for touch screen control.

7.6.3.2.5 Detected Movement

Selection of cursor movement direction horizontal ↔ and vertical ↑↓

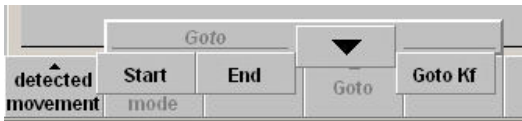


7.6.3.3 Editing Controls

- **Default** – Set **All / Geometric** parameter to default values



- **Goto** – Navigation inside the timeline. **Goto Start / End / KF** (Keyframe nn)



- **Insert** – Insert current state as keyframe before (**Kf Before**), or after (**Kf After**), or insert a **Pause** after the last keyframe.



- **Modify** – Open the modify dialog



Sel. KF Modify the selected keyframe
Selected Allows numeric input for geometric parameters.

Other commands not yet supported

- **Delete**



Keyframe Delete the selected keyframe. The total duration of the effect will be reduced by the keyframe duration of the deleted keyframe. If this keyframe is the only one, the values are set to factory default.

Pause Deletes the selected Pause.

All Kf's Deletes all keyframes. One keyframe always remains with factory default values.

7.6.3.4 Run Controls

Motion control buttons for selected effect, see below Inner Window, middle part.



If the **DVX Run Controls** button is activated the buttons left changes the function and created effect can be started.

Start:	Set effect to begin (first keyframe)
Reverse:	Play effect in reverse direction
Pause:	Pause effect
Play:	Play effect in normal direction
End:	Set effect to end (last keyframe)

7.6.3.5 Setup

This menu is the start menu for building an effect. Channels that are not enabled will not be stored and will not be affected when the register is recalled.

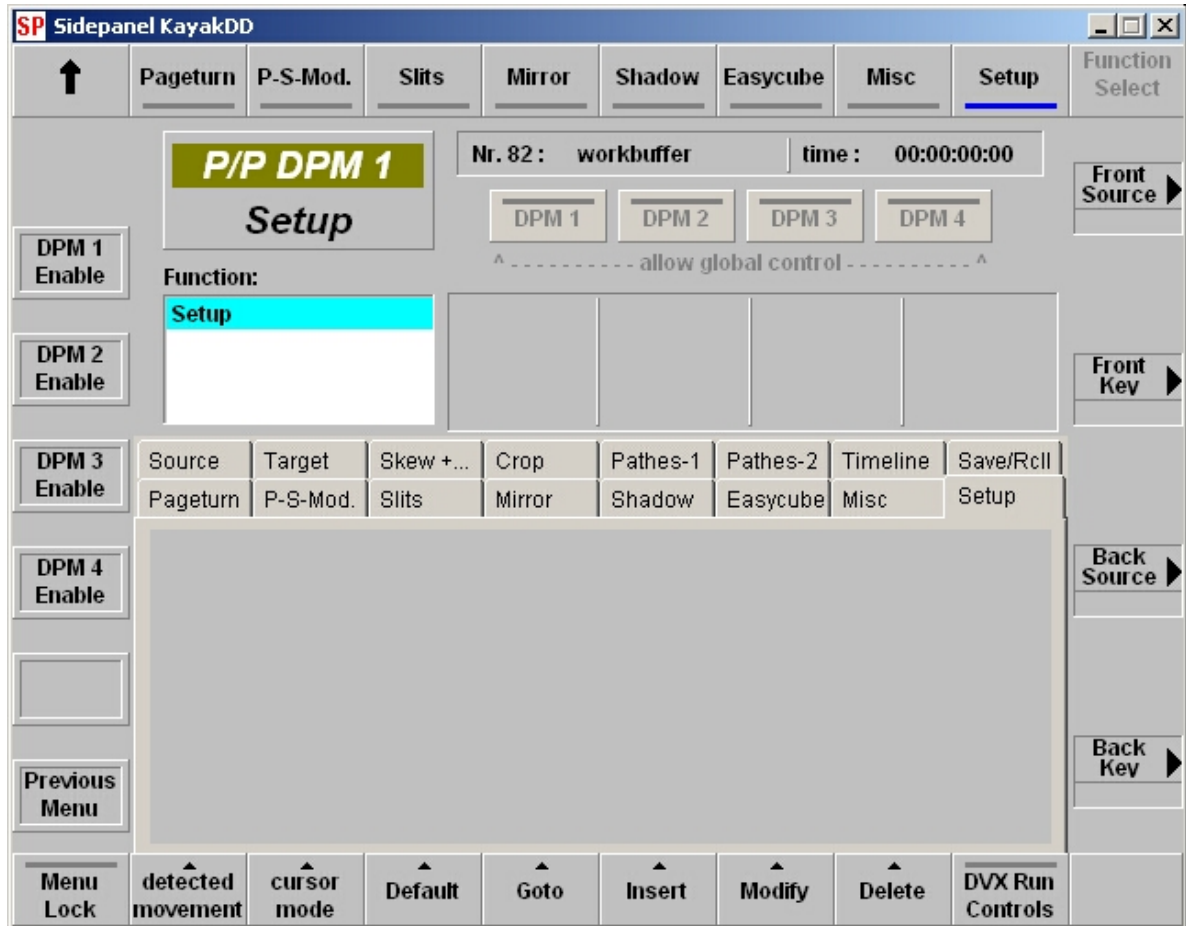


Figure 227 Sidepanel – DPM Edit – Setup Menu

7.6.3.6 Kurl-PS-Modulation

This menu is used as an example how the different types of parameters are modified. The parameters “Amplitude”, “Frequency”, “Phase” are modified in the way described above, depending on the Cursor Mode. The parameter “Warp Mode” is modified via a popup selection. Most of the menus work in this way. For detailed descriptions of the according parameters please refer to the description in the Menu Summaries section and the Concept section of this manual.

The up and down arrows at the right side of the value display can also be used to change the according values.



Figure 228 Sidepanel – DPM Edit – Kurl PS Modulation Menu

7.6.3.7 Timeline

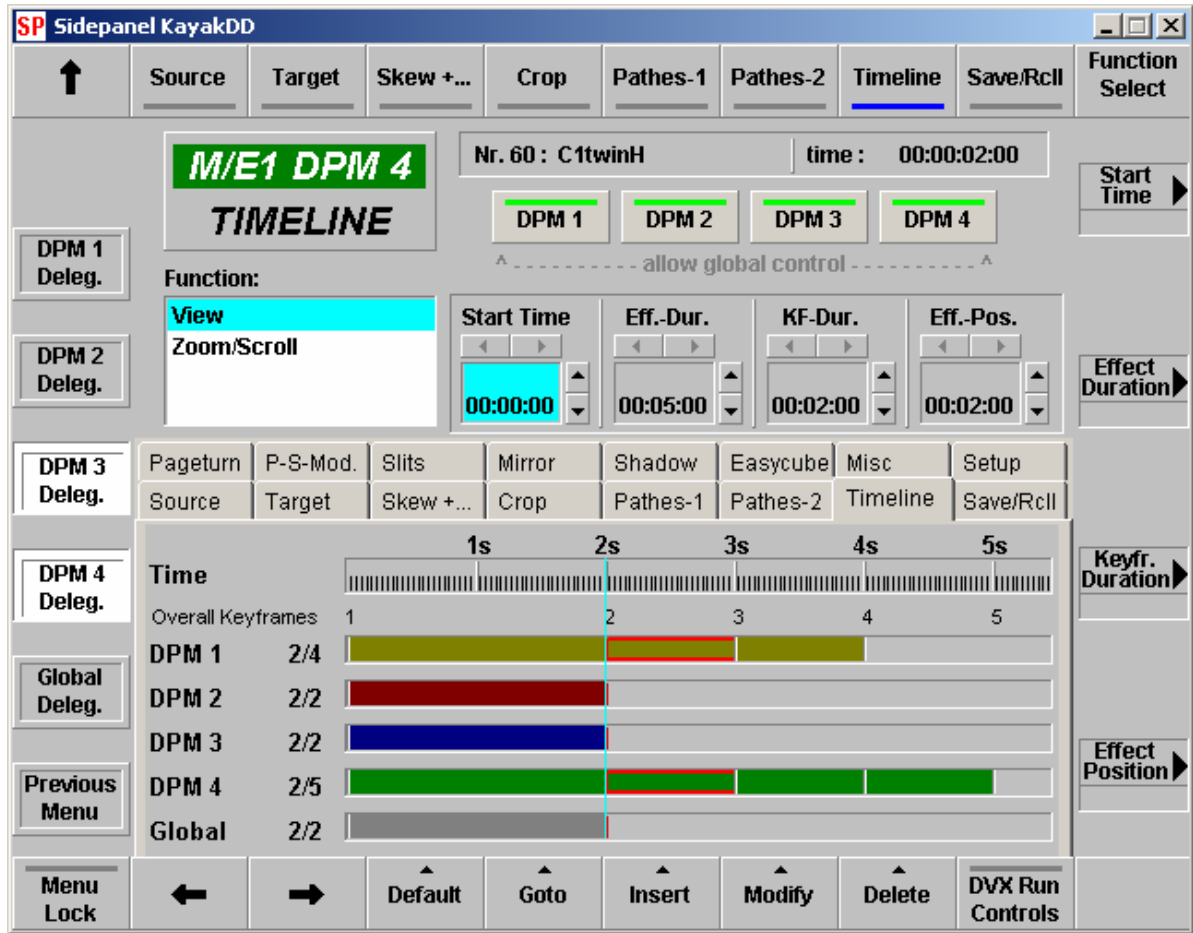


Figure 229 Sidepanel – DPM Edit – Timeline Menu

7.6.3.7.1 Page View

Start Time	Set timeline offset for selected DPM channel. Via "Modify / Selected" you can enter absolute timecode
Eff-Dur	Set the duration for the total timeline.
KF-Dur	Set the duration for the selected keyframe. Via "Modify / Selected" you can enter absolute timecode
Eff.-Pos	Moves the current position (cursor) in the timeline.

7.6.3.7.2 Page Zoom/Scroll

Zoom	Set the zoom window for the display
Scroll	Set the start timecode for the display.
Eff.-Pos	Moves the current position (cursor) in the timeline. (same as in "page View")
With the left / right arrow at the bottom you step to the previous / next keyframe.	

7.6.3.8 Save / Recall

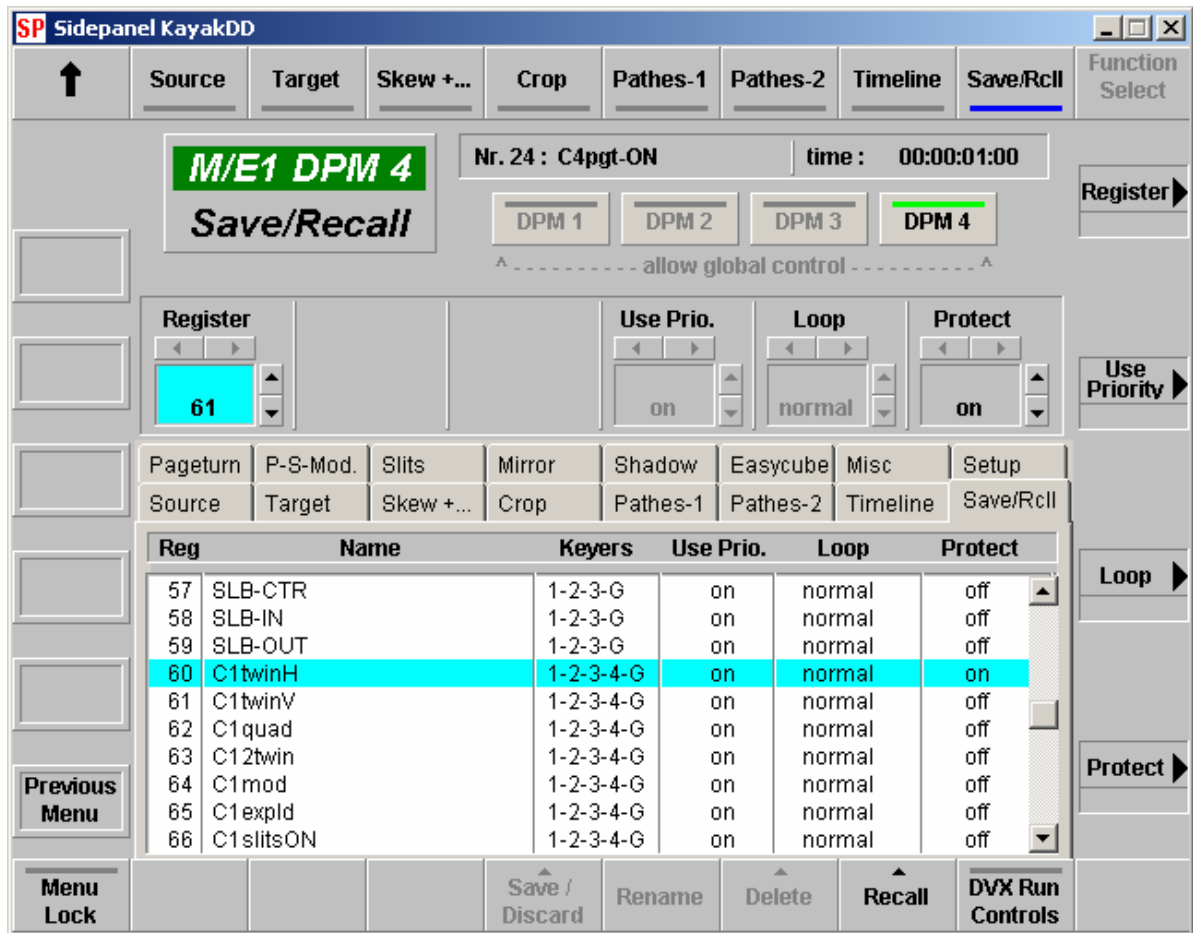


Figure 230 Sidepanel – DPM Edit – Save / Recall Menu

Register Select register for

- "Save/Discard"
- "Rename"
- "Delete"
- "Recall"
- "Use Priority"
- "Protect"
- "Loop"

Use Priority

"on": The DPM effect controls the keyer priority of the according ME
 "off": The keyer priority is controlled in the transition section and via E-MEM

Protect

"on": Register cannot be saved, renamed, or deleted
 "off": All operations are allowed

Loop

"normal": effect runs once

"loop": effect runs endlessly, always in forward play. When the end is reached, it jumps to the beginning

"bounce": effect runs endlessly, when the end is reached, it runs in reverse to the start, bouncing always between start and end

In the listbox per effect the involved keyers are listed.

7.6.3.9 Misc / Priority

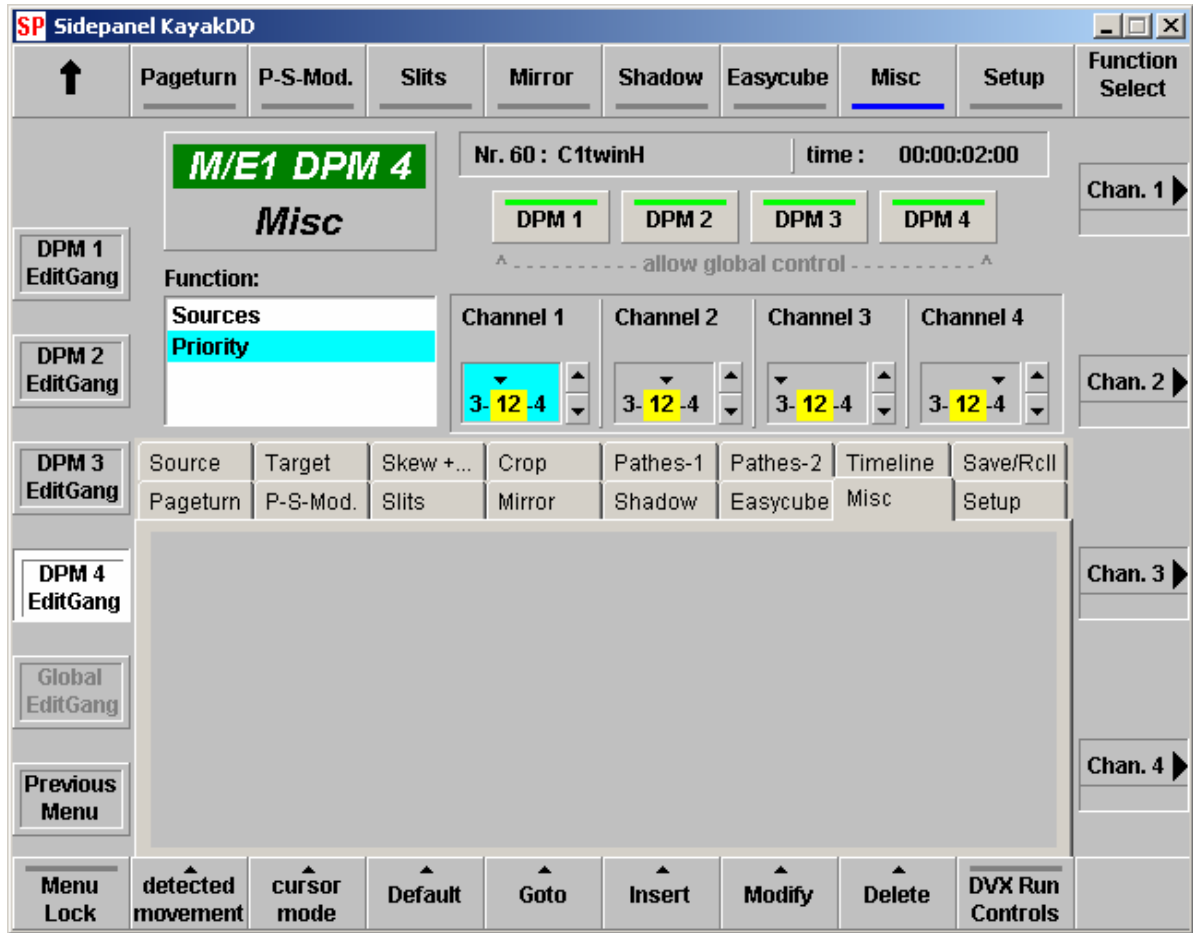


Figure 231 Sidepanel – DPM Edit – Misc Menu

Channel 1 Set the keyer priority for channel 1.
If the channel priority is lower than another channels, the channel number ("1") is left of the other numbers, separated by a dash ("-").
If the channel has z-priority with other channels, these channels are not separated by a dash and highlighted with yellow background.

Example: 3 – 12 – 4

This indication means: channel 3 has the lowest priority, channel 1 and 2 are together in one group of z-priority, but this group has always a higher priority than channel 3 and a lower priority than channel 4.

Channel 2	See channel 1
Channel 3	See channel 1
Channel 4	See channel 1

7.7 Media Player Menu

7.7.1 MP Status Menu

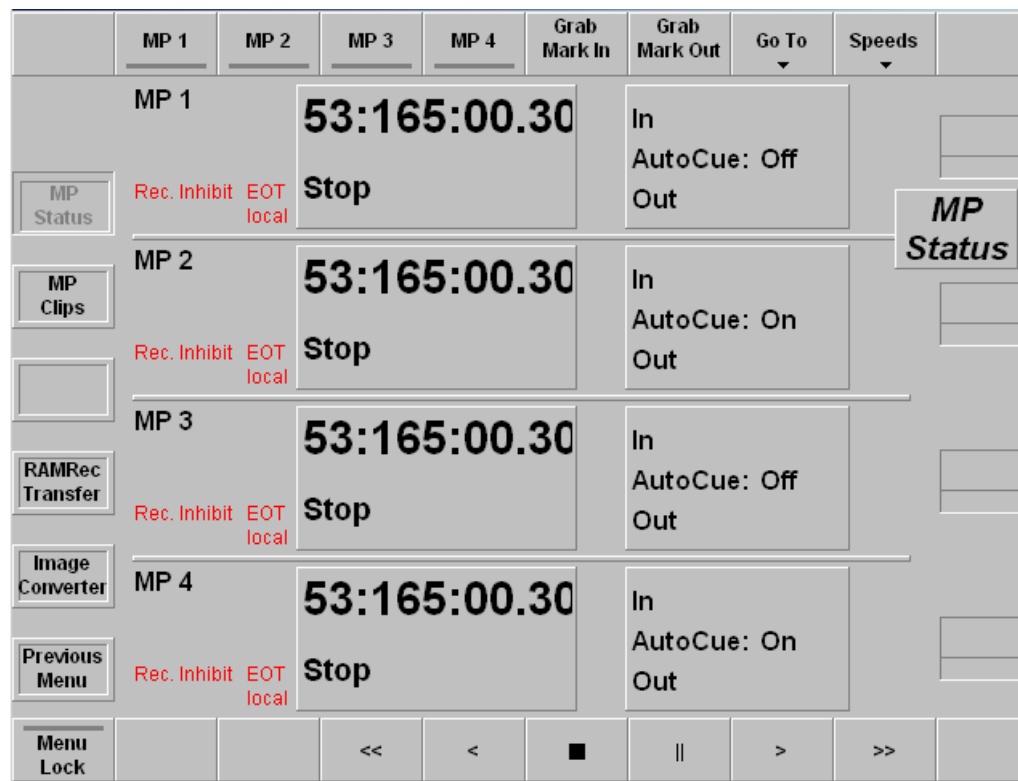


Figure 232 Sidepanel – Media Player Status Menu

The Status menu shows the status of up to four “Media Player” defined in the *Install / EBox / Machine* menu.

Display:

- Timecode
- In mark
- Out mark
- VTR operation mode (Play, Stop, Rewind, ...)

NOTE!

Dropframe is indicated in the MediaPool format. For example 01:23:12.06
The last colon is replaced by a dot in case of a drop frame.

7.7.1.1 Dialog Buttons

- **MP Status**
Selecting the Media Player Status menu.
- **MP Clips**
Selecting the Media Player Clip menu.
- **RAM Recorder Transfer**
Selecting the internal RAM Recorder menu.
- **Image Converter**
Selecting the internal Image Converter menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.7.1.2 Dialog Buttons

- **MP1 - MP2 - MP3 - MP4**
Selecting the desired machines
- **Grab Mark In**
Current timecode value of the selected machine is stored as Mark In.
- **Grab Mark Out**
Current timecode value of the selected machine is stored as Mark Out.
- **Go To**
Selected machine go to Mark In (Mark Out)
- **Speeds**
Selecting of the speed control:
 - Var Variable speed control with Digipot and Fader
 - Jog Jogging control with Digipot and Trackball
 - Shuttle Shuttle control with Digipot and Fader
- **Motion control buttons**
 - Fast rewind
 - Play reverse
 - Stop
 - Pause
 - Play forward
 - Fast forward

7.7.2 Media Player Clip Menu

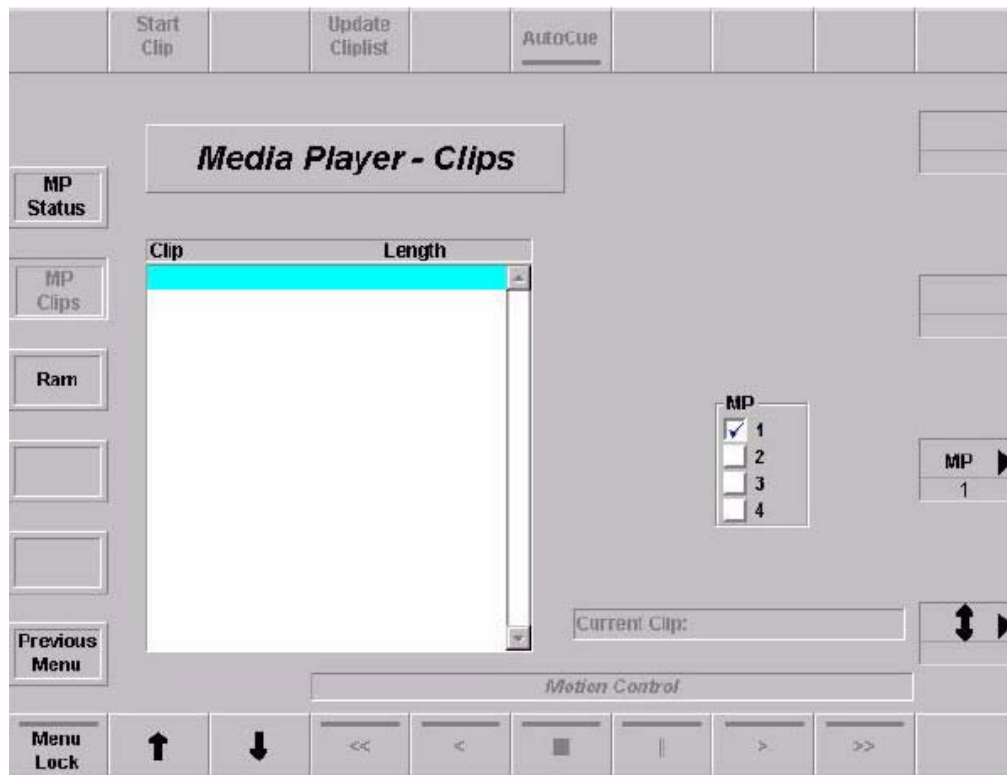


Figure 233 Sidepanel – Media Player Clip Menu

The Media Player Clip menu serves the drive control at VTR. For this purpose, the buttons in the Motion Control are provided. In addition, in this menu the clips list from a Media Server (e.g. MediaPool, EDIFIES) can be displayed.

7.7.2.1 Dialog Buttons

- **MP Status**
Selecting the Media Player menu.
- **RAM**
Selecting the internal RAM Recoder menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.7.2.2 Function Buttons

- **Start Clip**
Load the chosen clip from the Media Server
- **Update Cliplist**
Update Clip list requests a table of contents of all clips of the Media Server.
This procedure may take some time.
- **Autocue**
Selected machine jumps to the stored timecode value.
- **Motion control buttons**
 - Fast rewind
 - Play reverse
 - Stop
 - Pause
 - Play forward
 - Fast forward

7.7.3 RAM Recorder Transfer Menu

The RAM Recorder Transfer menu allows the user to transfer images to and from the RAM Recorder.

7.7.3.1 Clips To Ram

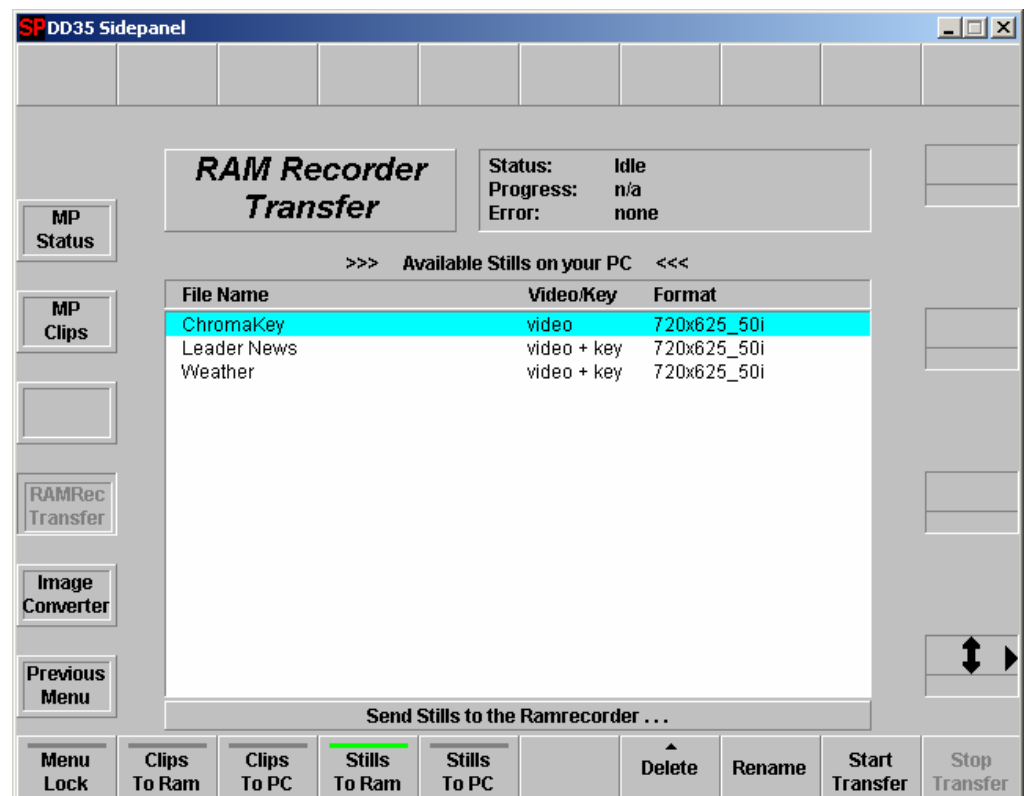


Figure 234 RAM Recorder - Transfer

The list of available clips (video, key or video+key) is displayed from the directory path "c:\Programme\DD35\ramrec"

Delete	Deletes the selected clip on your hard disk
Rename	Renames the selected clip on your hard disk
Start Transfer	Starts the file transfer of the selected clip to the RAM Recorder. Before the transfer a typewriter pops up to allow you to change the name of the clip. A total length of 31 characters is allowed for clip names of the RAM Recorder

7.7.3.2 Clips To PC

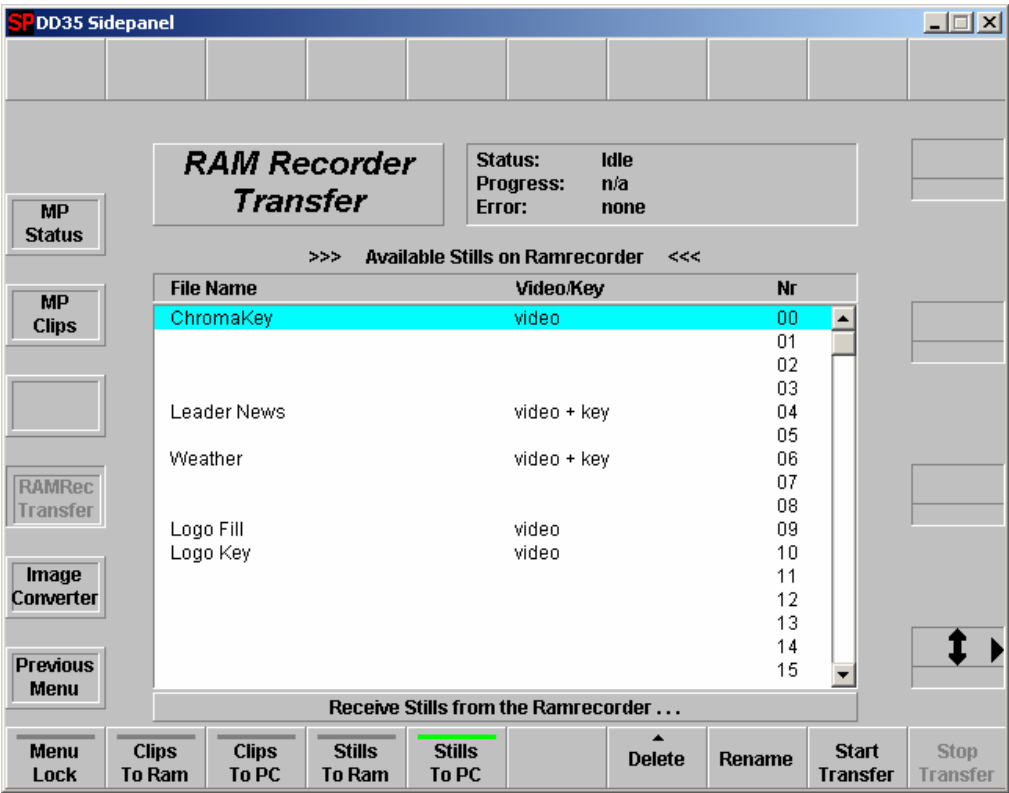


Figure 235 RAM Recorder - Transfer

- Delete** Deletes the selected clip on the RAM Recorder (in current software release enabled)
- Rename** Renames the selected clip on the RAM Recorder (not yet supported)
- Start Transfer** Starts the file transfer of the selected clip to the RAM Recorder.
Before the transfer a typewriter pops up to allow you to change the name of the clip.

7.7.3.3 Stills To Ram

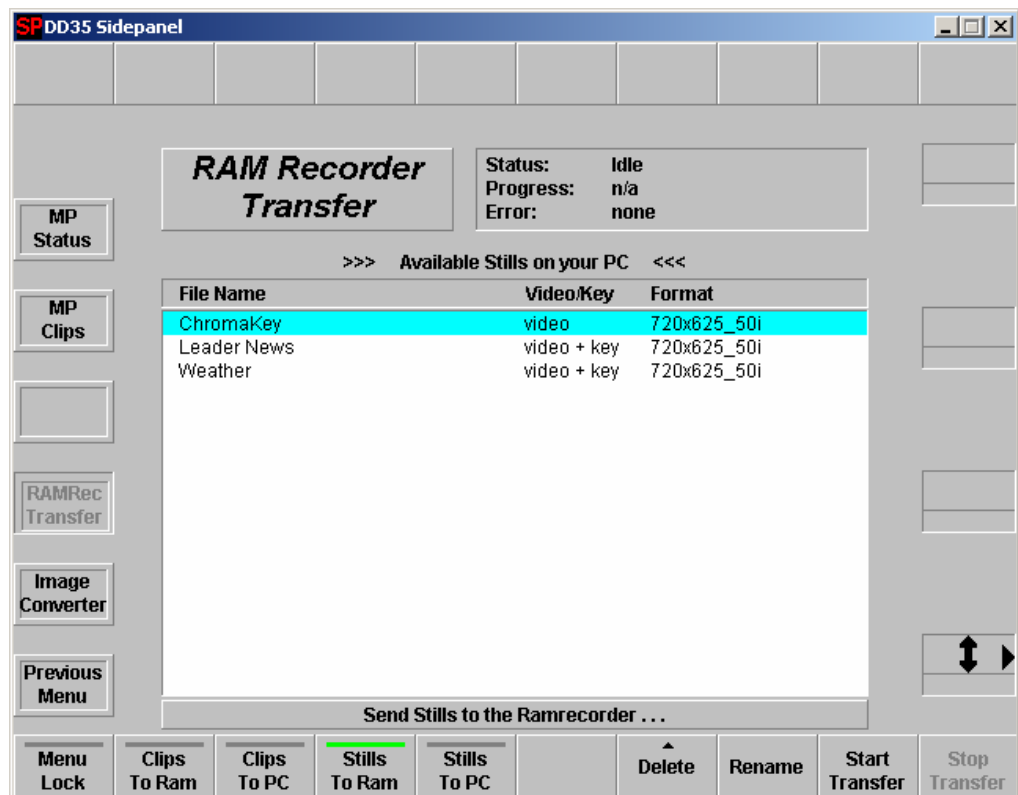


Figure 236 RAM Recorder - Transfer

The list of available clips is displayed from the directory path
"c:\Programme\DD35\ramrecStills"

- Delete** Deletes the selected still on your hard disk
- Rename** Renames the selected still on your hard disk
- Start Transfer** Starts the file transfer of the selected still to the RAM Recorder.
 Before the transfer a typewriter pops up to allow you to change the name of the still. A total length of 31 characters is allowed for still names of the RAM Recorder.

 Before the actual transfer starts you have to select the memory position you want to send the still to.
 (see next page)

7.7.3.4 Selection of the Memory Position for the Still to be Transferred

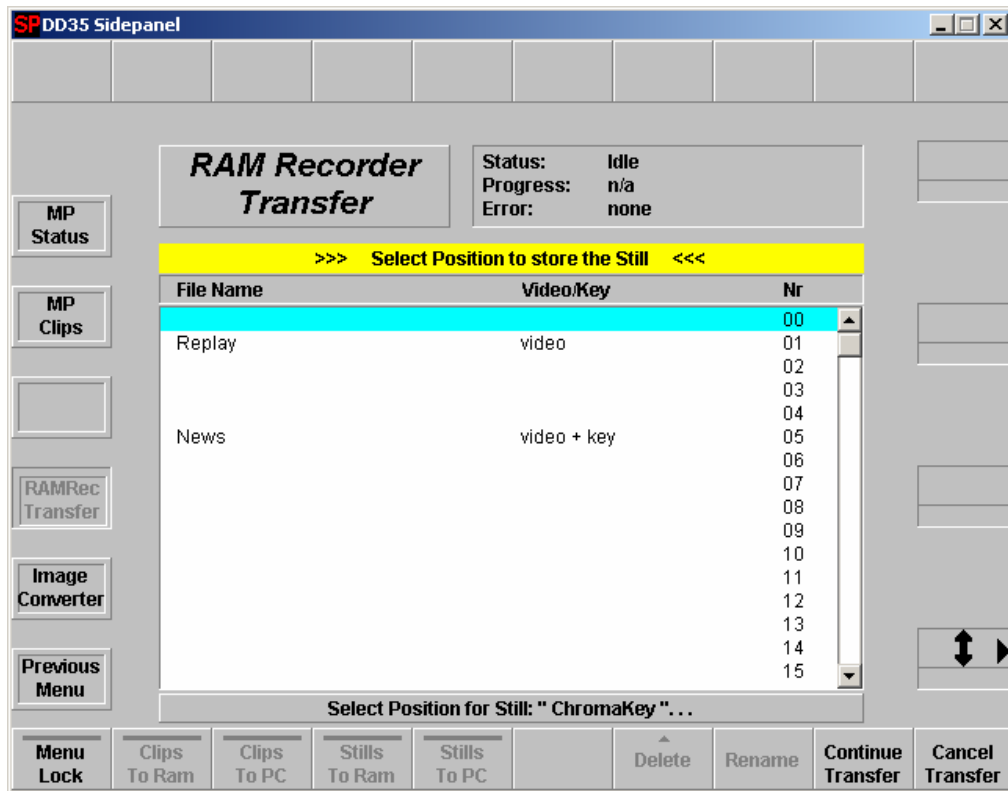


Figure 237 RAM Recorder - Transfer

Select a position and press **Continue Transfer** to start the actual transfer

7.7.4 Image Converter Menu

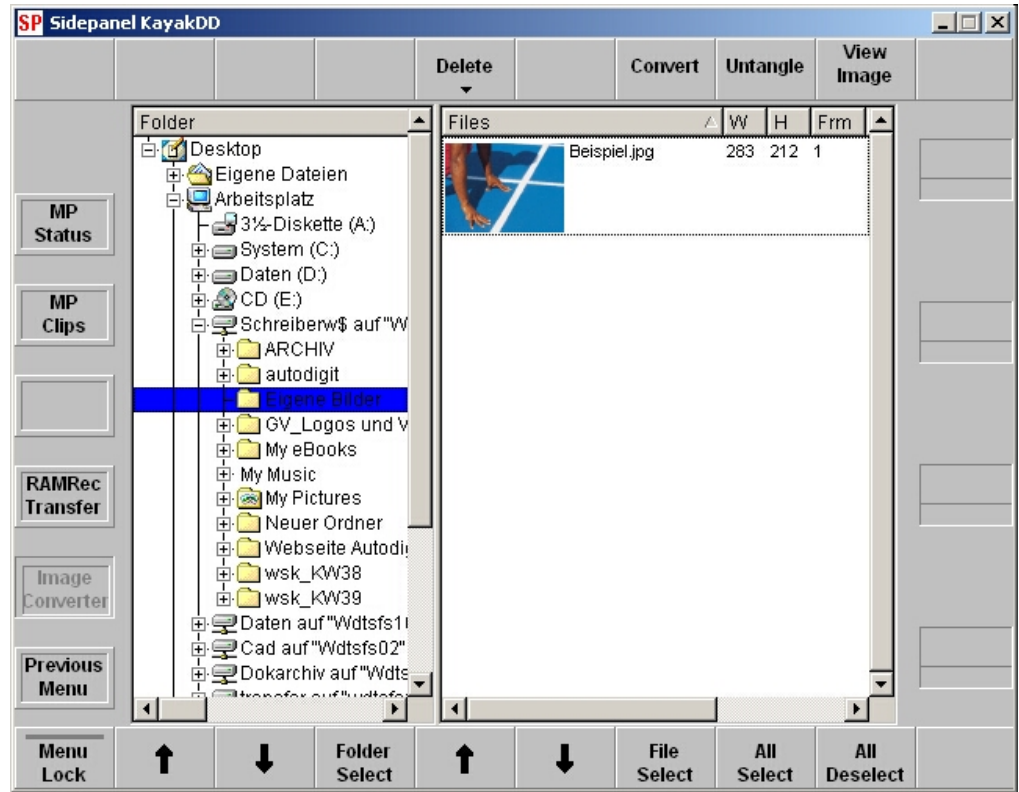


Figure 238 RAM Recorder – Image Converter

- The Image Converter is started with a browser. The left window shows the folders in a windows-typical way and the right window lists the files of the respectively selected folder.
- Double click to folder
- Selecting files, which have to be converted, is made by a left mouse click. Multiple selection is possible with the right mouse key.

NOTE!

When converting, the associated filter is started and one single sequence is created from the individual files! The picture order in the sequence is determined by the order of the selected files.

7.7.4.1 Select Destination Format

Activating the **Convert** button opens a dialog window for the detail adjustments. The following picture formats can be converted among each other:

AVI	Audio Video Interleaved
BMP	Windows/OS2 Bitmap
JPG	Joint Picture Expert Group
TGA	TrueVision Targa Image
TIFF	Tagged Image File Format
XTENDD	RAM Recorder File

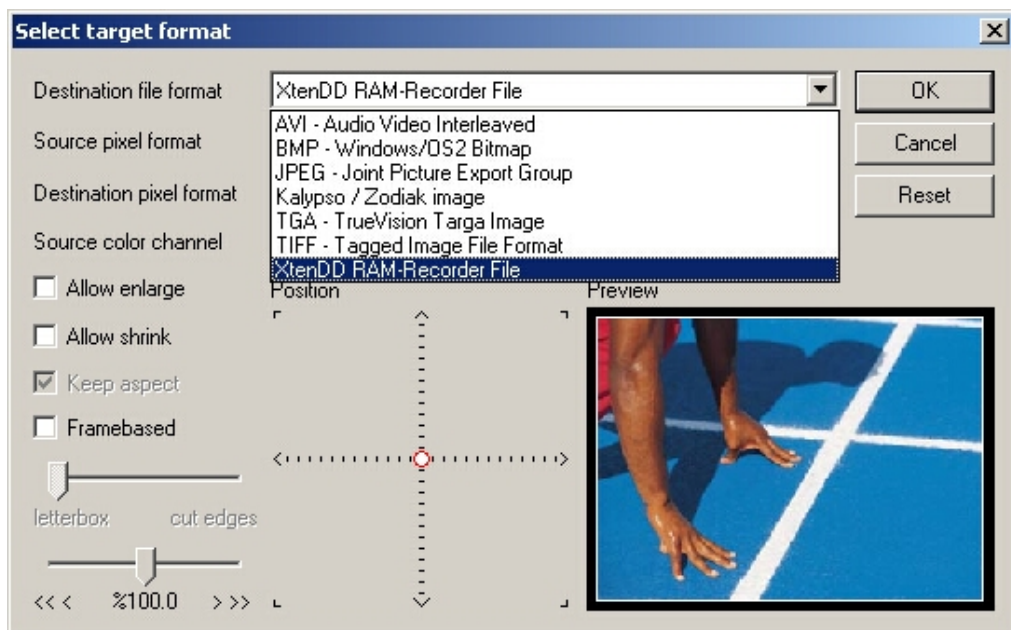


Figure 239 RAM Recorder – Image Converter – Select Target Format

Output File Name:

The name of the exit file has to be entered in a dialog box. The file extension is added automatically depending on destination pixel format. In general, the entered file name will be enlarged with a three-digit number to generate different file names if a sequence will be converted to single images.

Converting in AVI Format:

If AVI as target format is selected, a Codec dialog window appears. Select one of the listed Codec and close the dialog with OK.

NOTE!

If the dialog is canceled, an empty file will be generated!

7.7.4.2 Source Pixel Format

Activating the **Convert** button opens a dialog window for detail adjustments. The following Source Pixel formats can be adjusted:

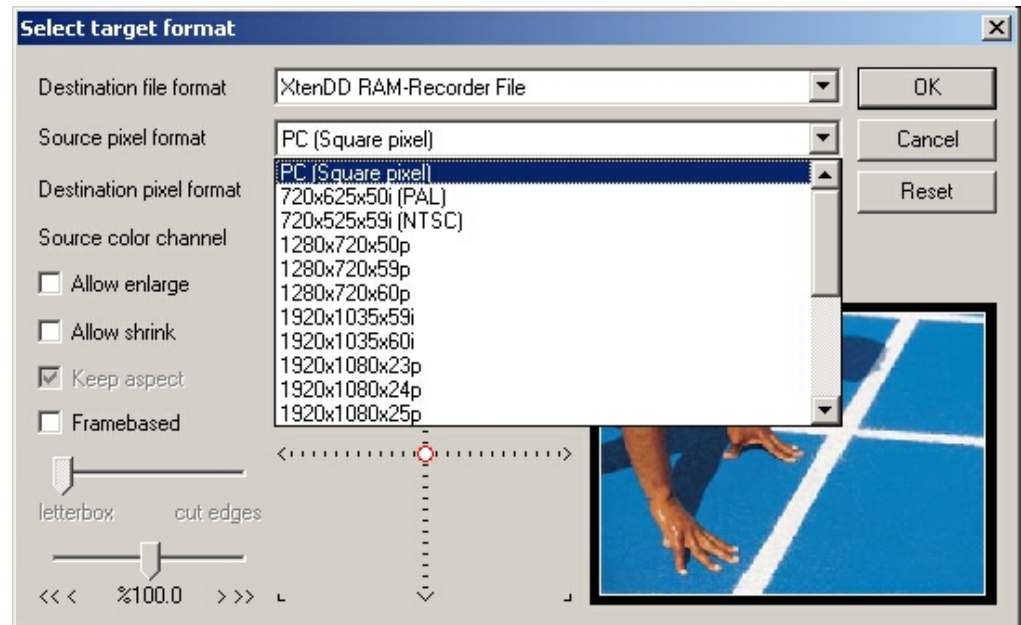
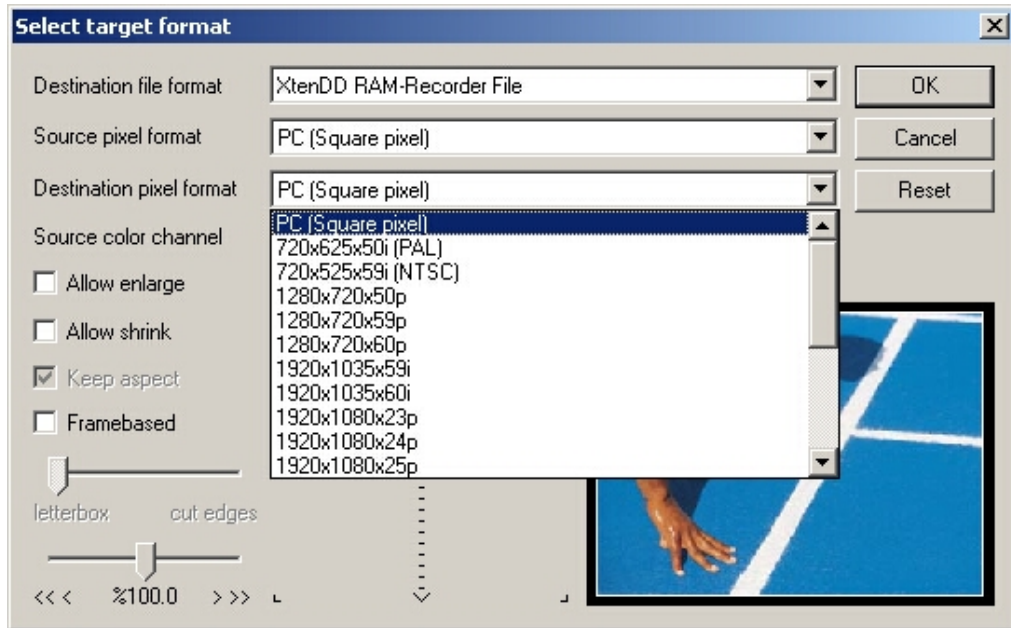


Figure 240 RAM Recorder – Image Converter – Source Pixel Format

7.7.4.3 Destination Pixel Format

Actuating the **Convert** button opens a dialog window for the detail adjustments. The following destination pixel formats can be adjusted:



If the source and destination pixel format is different, the image is resized to maintain the aspect ratio of the image content.

- If PC as destination pixel format is selected, the first picture to be converted determines the picture format of the destination file.
- If a TV format is selected as destination pixel format is selected, the destination file is coupled with TV format.

7.7.4.4 Converting Size, Positioning and Preview

Having selected the conversion parameters, you may have a look at the format in the Preview window. The **red frame** shows the outer edge of the picture (TV format only) to be converted and the **white frame** shows the limits of the picture screen after conversion.

The switches **Allow enlarge**, **Allow shrink**, **Keep aspect** and the controls located below enable adjusting and locating the desired picture section.

If **PC** is selected as destination pixel format, only the “size” control (<<< **xx%** >>>) is active.

7.7.4.5 Untangle

The UNTANGLE feature can be used for clips. Selecting the function cuts a clip in single frames.

7.8 Installation Menu

7.8.1 Install Main Menu

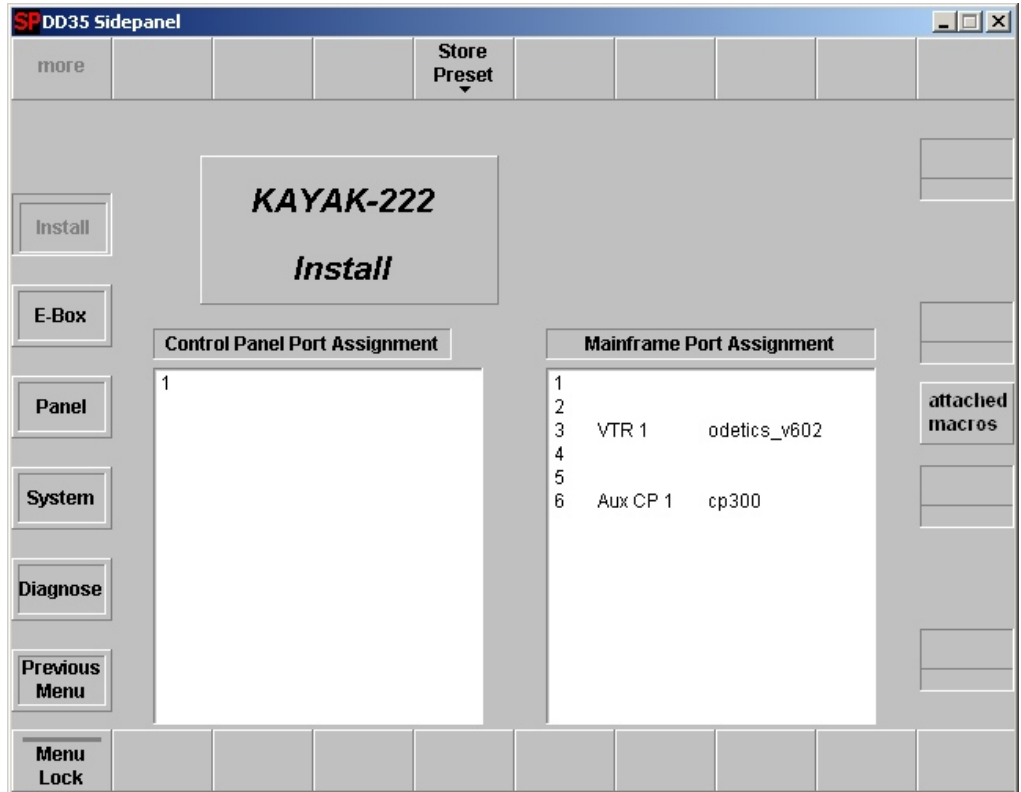


Figure 241 Sidepanel – Install Main Menu

Main menu with displays of the current control panel and mainframe port assignment.

7.8.1.1 Dialog Buttons

- **E-Box**
Selecting E-Box Install menu.
- **Panel**
Selecting Panel Install menu.
- **System**
Selecting System menu. Menu not yet implemented.
- **Diagnose**
Selecting Diagnose menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.8.1.2 Saving Operation Preset Data

Saving operation data as user defined preset is possible with the button Store Preset in the Install / E-Box menu.



- **OK**
The complete mainframe operational setting is saved as to be the new “operational preset” setting.
- **Cancel**
Canceling the save procedure.

7.8.2 Install E-Box Menu

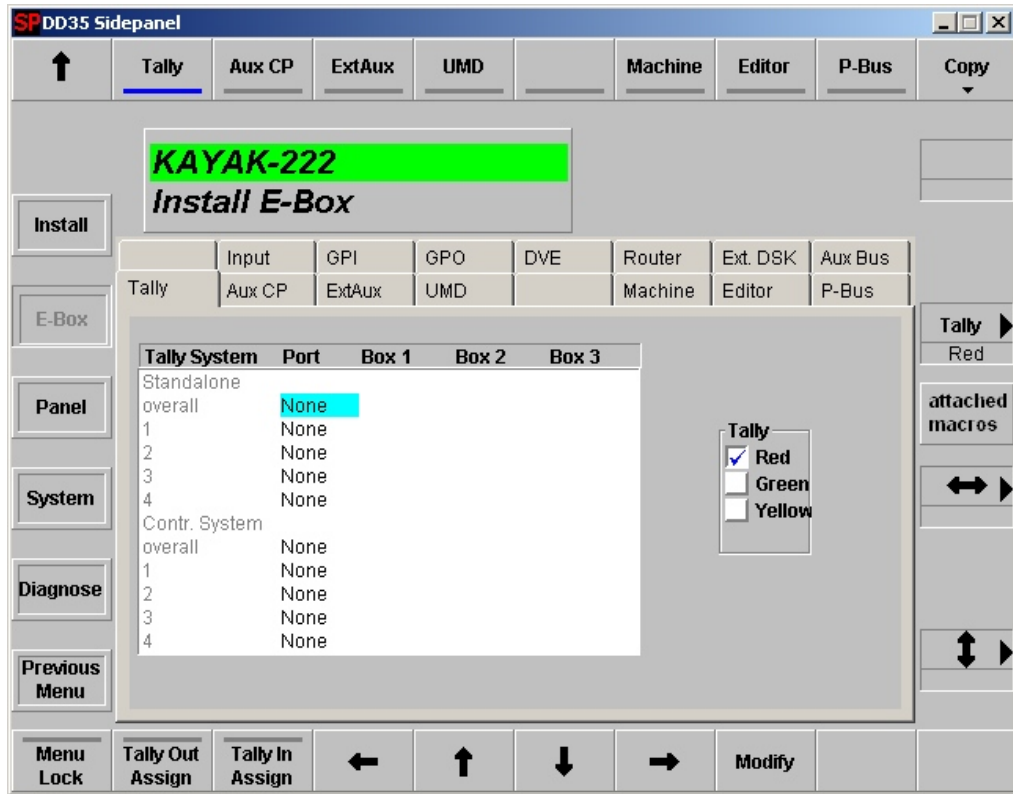


Figure 242 Sidepanel – Install E-Box Menu

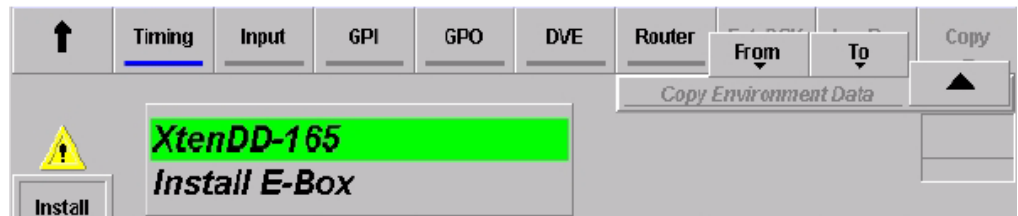
7.8.2.1 Dialog Buttons

- **Install**
Selecting Install main menu.
- **Panel**
Selecting Install Panel menu.
- **System**
Selecting System menu.
- **Diagnose**
Selecting Diagnose menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.8.2.2 Function Buttons / Index Cards

7.8.2.2.1 Copy

With the softkey Copy it is possible to store or load the files ENVIRON.INI and License.txt (E-Box) or ENVIR_CP.INI (panel) from a floppy disk or harddisk.



CAUTION! After loading the environment file, the switcher will reset!

7.8.2.2.2 Input

Index card for setting the input name transfer parameters and the Software patch Panel.

Tally	Aux CP	ExtAux	UMD		Machine	Editor	P-Bus
	Input	GPI	GPO	DVE	Router	Ext. DSK	Aux Bus

Subst. Table none

Input	Patched to	Ext. Name	Router Output	Router Level	Event Preroll	Event
1 IN01	1	No	0	0	0	none
2 IN02	2	No	0	0	0	none
3 IN03	3	No	0	0	0	none
4 IN04	4	No	0	0	0	none
5 IN05	5	No	0	0	0	none
6 IN06	6	No	0	0	0	none
7 IN07	7	No	0	0	0	none
8 IN08	8	No	0	0	0	none
9 IN09	9	No	0	0	0	none
10 IN10	10	No	0	0	0	none

select the "Event" column to display the complete command

Figure 243 Sidepanel – Index Card Copy

- ext. Name:** Enable / Disable the name transfer mode with Yes/No
- Patched to:** Option "Software Patch Panel":
Software License Key is required!
With the buttons Reset Patch Panel and Patch Panel On/Off the settings can be activated or resetted.
- Router Output:** Select the router output channel
- Router Level:** Select the level of the routing system (e.g. Prosan router)
- GPO Preroll:** in preparation
- Subst. Table:** None / SUBSTAB1 ... 15
Selecting a substitution table.
Refer also to Config / Panel / SubstTab menu.
The substitution tables are used for Simulcast mode.
This entry in this index card can only be modified if in the sidepanel PC's registry the value "USERINTERFACE / INPUT_SUBSTAB_SELECTABLE is set to "1".

7.8.2.2.3 GPI

Index card for modifying the GPI parameters.

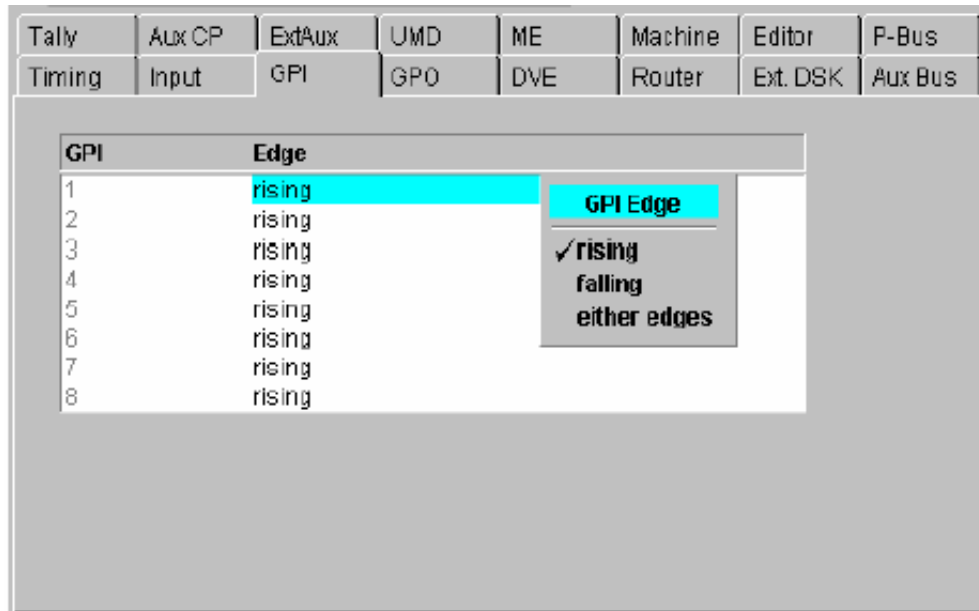


Figure 244 Sidepanel – Index Card GPI

Select Modify to determine wheatear the rising or falling edge of the arriving signal (GPI 1 ... 8) is to be used.

A GPI is considered Active when current flows through the LED of the opto-coupler at the GPI input. When no current flows the GPI is Inactive. Hence a Rising edge is the transition from Inactive to Active, and a Falling edge is the transition from Active to Inactive.

7.8.2.2.4 GPO

Index card for selecting and modifying the 32 GPO parameters.

Tally	Aux CP	ExtAux	UMD		Machine	Editor	P-Bus
	Input	GPI	GPO	DVE	Router	Ext. DSK	Aux Bus

GPO	Name	Shape	Idle State	Pulse Duration [Fields]
GPO1G		Static	Open	2
GPO2G		Pulse	Open	2
GPO3G		Pulse	Open	2
GPO4G		Pulse	Open	2
GPO5G		Pulse	Open	2
GPO6G		Pulse	Open	2
GPO7G		Pulse	Open	2
GPO8G		Pulse	Open	2
GPO9G		Pulse	Open	2
GPO10		Pulse	Open	2
GPO11		Pulse	Open	2
GPO12		Pulse	Open	2
GPO13		Pulse	Open	2

Figure 245 Sidepanel – Index Card GPO

Select Modify to change the parameters:

Shape: Pulse / Static

Idle State: Open / Closed

Pulse Duration: Enter the preroll time in frames (max 255 frames)

Attached to: Assign a fixed video source to the 32 GPI channel

7.8.2.2.5 DVE

Index card for selecting and modifying the DVE parameters.

Tally	Aux CP	ExtAux	UMD	ME	Machine	Editor	P-Bus
Timing	Input	OPI	OPQ	DVE	Router	Ext. DSK	Aux Bus

Parameter	Setting
Port	8
Type	none
Video In	1
Key In	2
Delay	0
Tally	extern
Video Send	AUX 1
Key Send	AUX 2
Control Port	9
Control Type	none
Control Delay	0

DVE

☒ 1

☐ 2

Figure 246 Sidepanel – Index Card DVE

For details refer to the respective section *Digital Video Effect System Integration* in your Planning & Installation Manual.

7.8.2.2.6 Router

Index card for selecting and modifying the parameters of external routers.

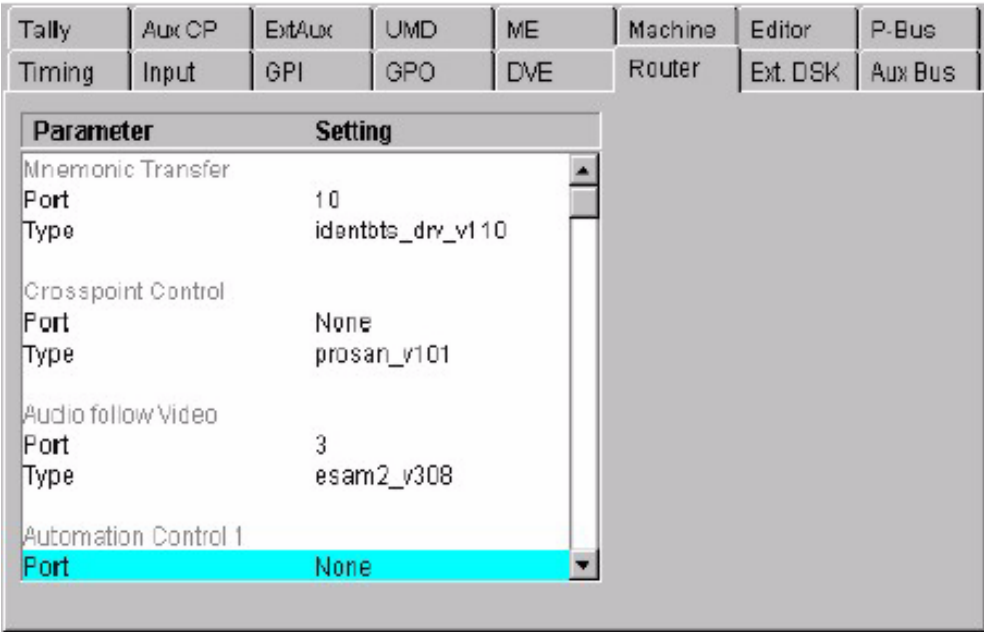


Figure 247 Sidepanel – Index Card Router

Two protocols and the assigned ports are selectable:

- Mnemonic Transfer:** Name transfer from the external router to the switcher control.
- Crosspoint Control:** Control protocol for the external Aux busses.
- Audio follow Video:** Control protocol for Audio follow Video, e.g. “esam2_V308”
- Automatic Control:** Control protocol for Autom. control system protocol , e.g. “acos_V300”

7.8.2.2.7 Ext DSK

Index card for installation the external DSK parameters.

Tally	Aux CP	ExtAux	UMD	ME	Machine	Editor	P-Bus
Timing	Input	GPI	GPO	DYE	Router	Ext. DSK	Aux Bus

Parameter	Setting
Port	None
Type	None
Tally	Inter
Key Send	none
Fill Send	none
ECG Source	none
Option Mask	No
Option Wipe	No
Option Fill Matte	No
Option Chroma Key	No
Option Key Opacity	No
Option FTB Auto	Yes
Option KEY Auto	No

Ext DSK
☒ DSK 5
☐ DSK 6
☐ DSK 7

Figure 248 Sidepanel – Index Card External DSK

For details refer to the section *External Downstream Keyers* in your Planning & Installation Manual.

7.8.2.2.8 Aux Bus

Index card for installation the Aux Bus parameters.

Tally	Aux CP	ExtAux	UMD		Machine	Editor	P-Bus
	Input	GPI	GPO	DVE	Router	Ext. DSK	Aux Bus
AUX Bus	Output	Phaser	Permanent Input				
1	10 Bit	Phased	none				
2	10 Bit	Phased	none				
3	10 Bit	Phased	none				
4	10 Bit	Phased	none				
5	10 Bit	Phased	none				
6	10 Bit	Phased	none				
7	10 Bit	Phased	none				
8	10 Bit	Phased	none				
9	10 Bit	Phased	none				
10	10 Bit	Phased	none				

Figure 249 Sidepanel – Index Card Aux Busses

All 10 Aux buses of the KayakDD are generally phased. Output coding and Permanent Input can be selected by pressing the Modify button.

7.8.2.2.9 Tally

Index card for selecting Tally ports and setting the MI-3040 box addresses.

	Input	GPI	GPO	DVE	Router	Ext. DSK	Aux Bus
Tally	Aux CP	ExtAux	UMD		Machine	Editor	P-Bus

Tally System	Port	Box 1	Box 2	Box 3
Standalone				
overall	None			
1	None			
2	None			
3	None			
4	None			
Contr. System				
overall	None			
1	None			
2	None			
3	None			
4	None			

Tally

☒ Red

☐ Green

☐ Yellow

Figure 250 Sidepanel – Index Card Tally

NOTE!

Two MI-3040 boxes can be addressed as to be one box with 80bits if they have the same MPK address and if they are installed in neighbor columns in the table above. Within a tally channel (Red, Green, Yellow) same box addresses may be used. However, a box address cannot be used in different colors.

For details refer to the section “Tally Signaling” in your Planning & Installation Manual.

Pressing the button Tally Out Assignment opens a new dialog page for Tally Assignment:

Timing	Input	GPI	GPO	DVE	Router	Ext. DSK	Aux Bus
Tally	Aux CP	ExtAux	UMD	ME	Machine	Editor	P-Bus

Tally Bit	Red	Green	Yellow
1 (Box 1 Bit 1)	VID_INPUT_01	VID_INPUT_01	VID_INPUT_01
2 (Box 1 Bit 2)	VID_INPUT_02	VID_INPUT_02	VID_INPUT_02
3 (Box 1 Bit 3)	VID_INPUT_03	VID_INPUT_03	VID_INPUT_03
4 (Box 1 Bit 4)	VID_INPUT_04	VID_INPUT_04	VID_INPUT_04
5 (Box 1 Bit 5)	VID_INPUT_05	VID_INPUT_05	VID_INPUT_05
6 (Box 1 Bit 6)	VID_INPUT_06	VID_INPUT_06	VID_INPUT_06
7 (Box 1 Bit 7)	VID_INPUT_07	VID_INPUT_07	VID_INPUT_07
8 (Box 1 Bit 8)	VID_INPUT_08	VID_INPUT_08	VID_INPUT_08
9 (Box 1 Bit 9)	VID_INPUT_09	VID_INPUT_09	VID_INPUT_09
10 (Box 1 Bit 10)	VID_INPUT_10	VID_INPUT_10	VID_INPUT_10
11 (Box 1 Bit 11)	VID_INPUT_11	VID_INPUT_11	VID_INPUT_11
12 (Box 1 Bit 12)	VID_INPUT_12	VID_INPUT_12	VID_INPUT_12
13 (Box 1 Bit 13)	VID_INPUT_13	VID_INPUT_13	VID_INPUT_13
14 (Box 1 Bit 14)	VID_INPUT_14	VID_INPUT_14	VID_INPUT_14

Figure 251 Sidepanel – Index Card Tally Assignment

With the following buttons the Tally Assignment can be changed:

Tally Out Assign:	dialog page appears/disappears
Tally Assign:	switched assignment on/off
Modify:	changed the assignment
Reset Assign:	reset the channels to Default or None
Copy Assign:	copied assignment from channel to channel

A “modified” state of each channel will be displayed in the headline of the assignment table.

7.8.2.2.10 Aux CP

Index card for installing the Aux Control Panels connected with the mainframe.
For Details refer to the Planning and Installation Manual.

Timing	Input	GPI	GPO	DVE	Router	Ext. DSK	Aux Bus
Tally	Aux CP	ExtAux	UMD	ME	Machine	Editor	P-Bus

Aux CP No.	Type	Port	MPK Address
1	cp300	None	not inst.
2	cp330	None	not inst.
3	none	None	not inst.
4		None	not inst.

Figure 252 Sidepanel – Index Card Aux CP

Type: Opens a pop-up window with all types of Aux Control Panels.

Port: Opens a pop-up window with all ports plus "None" like in all other menus where a port must be configured.

NOTE!

The port must be different to the ports used for DVEs, Editors, ext. DSKs, etc.

MPK Address: Opens the typewriter pop-up window. The physical MPK address of the AUX-CP must be entered. Refer the label at the rear of the panel modules (e.g. CP-3020: e0002d43).

7.8.2.2.11 Ext Aux

Index card for selecting and modifying the external Aux parameters.

Timing	Input	GPI	OPO	DVE	Router	Ext. DSK	Aux Bus
Tally	Aux CP	ExtAux	UMD	ME	Machine	Editor	P-Bus
ExtAux Bus		Router Output		Router Level			
1		1		0			
2		2		1			
3		3		2			
4		4		3			
5		5		4			
6		6		5			
7		7		6			
8		8		7			
9		58		0			
10		59		1			
11		60		2			
12		61		3			
13		62		4			
14		63		5			
15		64		6			

Figure 253 Sidepanel – Index Card Ext Aux

The card enables the ability to select a special output at a defined level of the router.

Example:

If you select in the column Router Output the number 6 and in the column Router Level the number 1 then it corresponds to the specification that External Aux Bus 1 is connected with the router output 6 at level 1. The number of the levels and router outputs depends of the router control protocol.

7.8.2.2.12 UMD

Index card for installation the Under Monitor Displays and set the tally mode.

Timing	Input	OPI	OPO	DVE	Router	Ext. DBK	Aux Bus
Tally	Aux CP	ExtAux	UMD	ME	Machine	Editor	P-Bus

UMD Address	Display 1	Display 2	Display 3
1	0	none	none
2	not inst.	none	none
3	not inst.	none	none
4	not inst.	none	none
5	not inst.	none	none
6	not inst.	none	none
7	not inst.	none	none
8	not inst.	none	none
9	not inst.	none	none
10	not inst.	none	none
11	not inst.	none	none
12	not inst.	none	none

None
Red / Red

Figure 254 Sidepanel – Index Card UMD

For details refer to the section “Under Monitor Displays” in your Installation Manual.

7.8.2.2.13 Machine

Index card for installation the machine parameters (e.g. VTR) for Machine Control and VTR Emulation.

Timing	Input	GPI	GPO	DVE	Router	Ext. DSK	Aux Bus
Tally	Aux CP	ExtAux	UMD	ME	Machine	Editor	P-Bus

Machine Control		VTR Emulation	
Parameter	Setting	Parameter	Setting
Machine 1		VTR Emulation 1	
Port	1	Port	None
Type	bww75play_v102	Type	None
		Device	none
Machine 2		VTR Emulation 2	
Port	2	Port	None
Type	none	Type	None
		Device	none
Machine 3		VTR Emulation 3	
Port	3	Port	None
Type	none	Type	None
		Device	none
Machine 4			
Port	4		

Figure 255 Sidepanel – Index Card Machine

The setting can be changed by navigating the parameter and pressing the Modify button. For operating refer to section *Machine Control*.

7.8.2.2.14 Editor

Index card for installation the Editor parameters.

Timing	Input	GPI	GPO	DVE	Router	Ext. DSK	Aux Bus
Tally	Aux CP	ExtAux	UMD	ME	Machine	Editor	P-Bus

Parameter	Setting
Port	None
Type	none

Editor

- ☒ 1
- ☐ 2
- ☐ 3
- ☐ 4

Figure 256 Sidepanel – Index Card Editor

For details refer to the section “Editor Control” in your Installation Manual.

7.8.2.2.15 P-Bus

Index card for setting the P-Bus parameters.

The Install E-Box / P-Bus (= Peripheral Bus) menu defines the machines which can be controlled via an RS422 bus. In the left list box of the P-Bus index card, these machines can be provided with a name and can be activated or deactivated.

Timing	Input	GPI	GPO	DVE	Router	Ext. DSK	Aux Bus																																																
Tally	Aux CP	ExtAux	UMD	ME	Machine	Editor	P-Bus																																																
<table border="1"> <thead> <tr> <th>Machine</th> <th>Name</th> <th>Active</th> </tr> </thead> <tbody> <tr><td>0</td><td>none</td><td>No</td></tr> <tr><td>1</td><td>none</td><td>No</td></tr> <tr><td>2</td><td>none</td><td>No</td></tr> <tr><td>3</td><td>none</td><td>No</td></tr> <tr><td>4</td><td>none</td><td>No</td></tr> <tr><td>5</td><td>none</td><td>No</td></tr> <tr><td>6</td><td>none</td><td>No</td></tr> <tr><td>7</td><td>none</td><td>No</td></tr> <tr><td>8</td><td>none</td><td>No</td></tr> <tr><td>9</td><td>none</td><td>No</td></tr> <tr><td>10</td><td>none</td><td>No</td></tr> <tr><td>11</td><td>none</td><td>No</td></tr> <tr><td>12</td><td>none</td><td>No</td></tr> <tr><td>13</td><td>none</td><td>No</td></tr> <tr><td>14</td><td>none</td><td>No</td></tr> </tbody> </table>								Machine	Name	Active	0	none	No	1	none	No	2	none	No	3	none	No	4	none	No	5	none	No	6	none	No	7	none	No	8	none	No	9	none	No	10	none	No	11	none	No	12	none	No	13	none	No	14	none	No
Machine	Name	Active																																																					
0	none	No																																																					
1	none	No																																																					
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Trigger 13	Trg13																																																						
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Figure 257 Sidepanel – Index Card P-Bus

The right list box enables to provide for each of these machines the trigger events with function names (e.g. PLAY, SHUTTLE). For each machine there are the trigger from 0 ... 15 which can be assigned each to other function. The name can be selected from a list of default names which provides specific names for this application.

The list of trigger names consist of a fixed-programmed part and a freely definable part. The freely definable part – 16 names – can be adjusted in the sub-dialog Edit Names.

For controlling the machines refer to section Remote P-Bus / Trigger.

7.8.3 Install Panel Menu

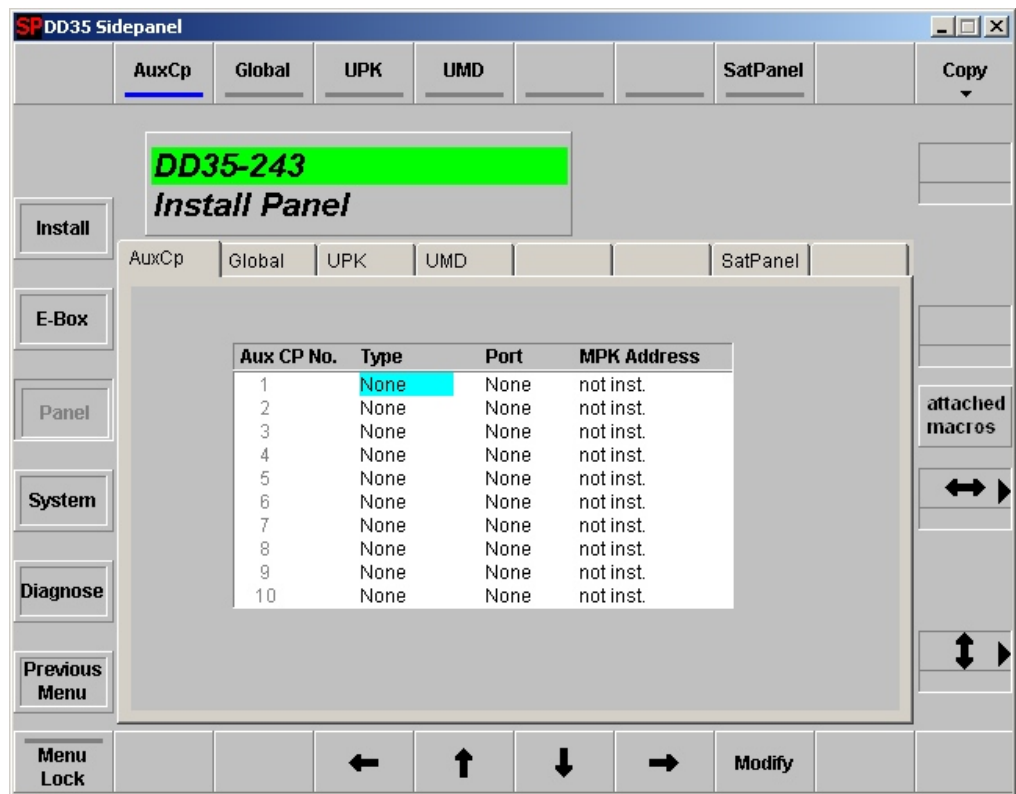


Figure 258 Sidepanel – Install Panel Menu

7.8.3.1 Dialog Buttons

- **Install**
Selecting Install main menu.
- **E-Box**
Selecting E-Box Install menu.
- **System**
Selecting System menu.
- **Diagnose**
Selecting Diagnose menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.8.3.2 Function Buttons / Index Cards

7.8.3.2.1 Menu Lock

For details refer to section *Introduction*.

7.8.3.2.2 Cursor Up/Down/Left/Right

The cursor buttons are used to navigate within the table

7.8.3.2.3 Aux CP

Index card for installing the Aux Control Panels connected to the switcher control panel. For Details refer to your the Planning and Installation Manual.

AuxCP	Global	UPK	UMD	GPI	GPO	SatPanel	
Aux CP No.	Type	Port	MPK Address				
1	cp300	None	70027db				
2	cp330	None	7002a52				
3	cp300	None	7001b5a				
4	cp330	None	not inst.				
5		None	not inst.				
6		None	not inst.				
7		None	not inst.				
8		None	not inst.				
9		None	not inst.				
10	cp300	None	not inst.				

Figure 259 Sidepanel – Index Card Aux CP

Type: Opens a pop-up window with all types of Aux Control Panels.

Port: Opens a pop-up window with all ports plus "None" like in all other menus where a port must be configured.

NOTE!
The port must be different to the ports used for DVEs, Editors, ext. DSKs, etc.

MPK Address: Opens the typewriter pop-up window.
 The physical MPK address of the AUX-CP must be entered.
 Refer to the label at the rear of the panel modules (e.g. CP-3020: e0002d43).

7.8.3.2.4 Global

Index card for performing global panel settings and fader adjustment.

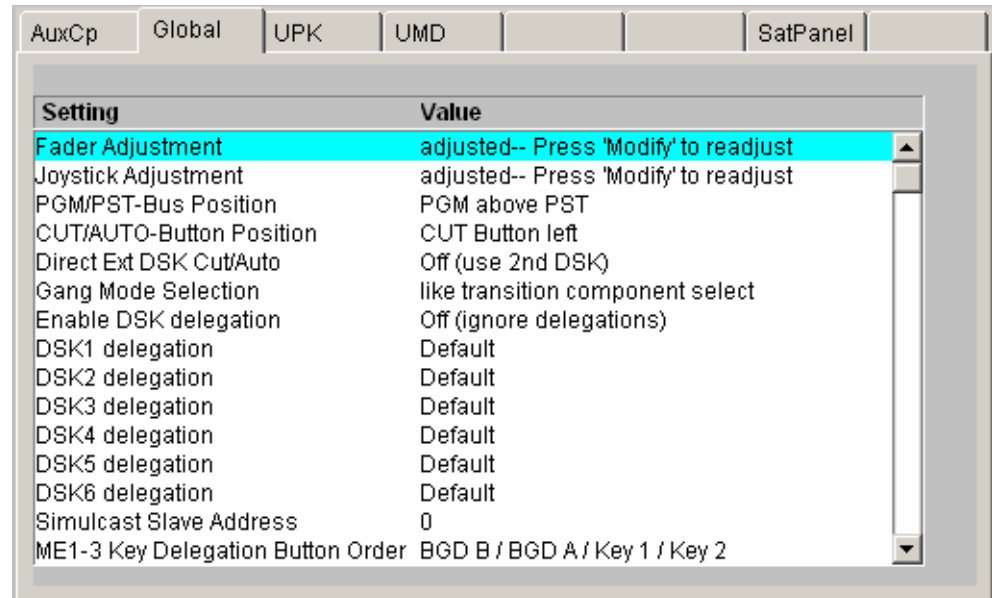


Figure 260 Sidepanel – Index Card Aux Global

Fader/Joystick Adjustment:

Adjustment of the fader end-position values (fine adjustment of the A/D converters):

Lower end-position: 0% signal, Upper end-position: 100% signal. Press Modify, a pup-up menu with dialog messages appears. Move all faders to the upper end-position and select the menu entry in the pup-up menu "Move all faders to the upper position and press OK".

Move all faders to the lower end-position and select the entry in the pup-up menu "Move all faders to the lower position and press OK". The automatic adjustment is finish.

End-position means: Move the fader with gentle force as far as it will go.

During the fader adjustment the fader moving have no effect on video signals!

The following settings can be selected and/or adjusted:

PGM/PST Bus Position:	PGM above PST / ...
CUT/AUTO Button Position:	CUT right / left
ShiftButtons:	None / Left / Right / Left and Right
Simulcast Slave Address:	Last byte of the defined mainframe IP address

7.8.3.2.5 UPK (User programmable keys/buttons)

In this index card, many buttons available in the panel sections, can be assigned to other functions. The functions are individual for each button. Select the desired function with pressing the Modify button.

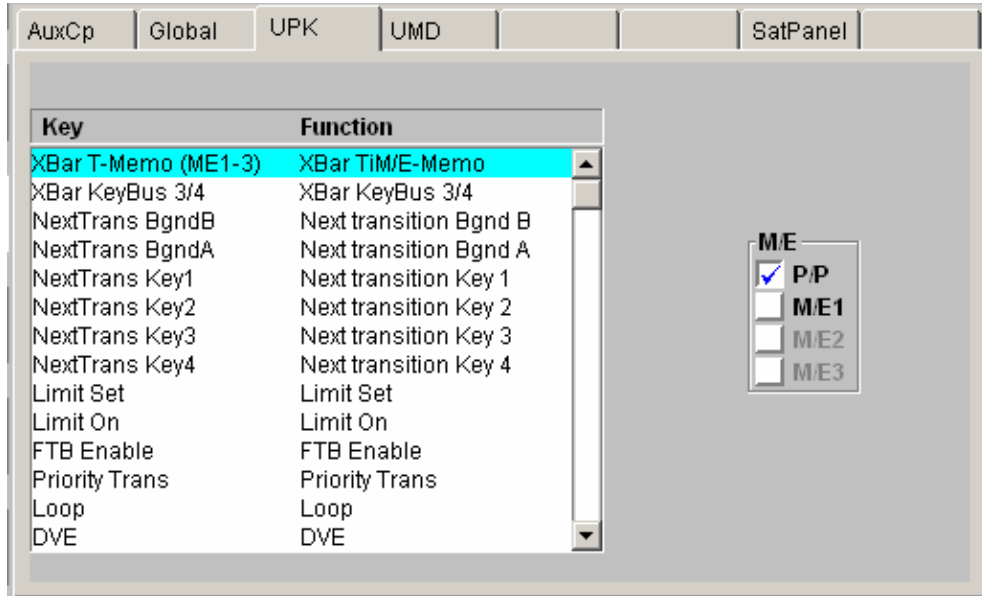


Figure 261 Sidepanel – Index Card UPK

The following buttons are programmable:

- **DVE Transition**
- **Mix Transition**
- **Wipe1 Transition**
- **Wipe2 Transition**
- **BlkPst Transition**
- **Trans PVW Transition**
- **NextTrans Bgd B Transition**
- **NextTrans Bgd A Transition**
- **NextTrans Key 1 Transition**
- **NextTrans Key 2 Transition**
- **NextTrans Key 3 Transition**

Note that the number of buttons is dependent on it panel type.

The following functions are programmable for the respective buttons described above:

- **Default function (button specific)**
- **None**
- **Limit Set**
- **Limit On**
- **Wipe 1**
- **Wipe 2**
- **Add**
- **DVE**
- **GPO 1**
- **GPO 2**
- **GPO 3**
- **GPO 4**
- **GPO 5**
- **GPO 6**
- **GPO 7**
- **GPO 8**
- **Next Transition Bgnd B**
- **Next Transition Bgnd A**
- **Next Transition key 1**
- **Next Transition key 2**
- **Next transition key 3**
- **Next Transition key 4**
- **Mix Transition**
- **Auto Transition key**
- **Auto Transition key**
- **Auto Transition key**
- **Auto Transition key**
- **Enable/Disable V-Fade 1**
- **Enable/Disable V-Fade 2**
- **Enable/Disable V-Fade 3**
- **Enable/Disable V-Fade 4**
- **Simulcast Master**
- **Simulcast Slave**
- **Show Button Macro Attachments**
- **Transition Preview**
- **Cut key 1**
- **Cut key 2**
- **Cut key 3**
- **Cut key 4**

7.8.3.2.6 UMD

Index card for installation the Under Monitor Displays and set the tally mode.

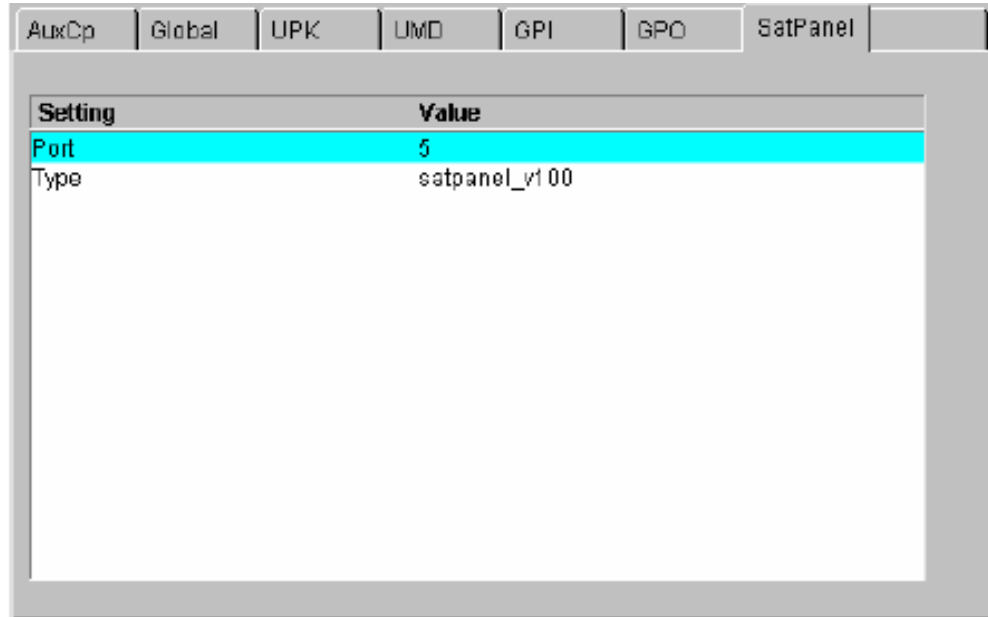
AUXCp	Global	UPK	UMD	GPI	GPO	SatPanel
UMD	Address	Display 1	Display 2	Display 3		
1	0	PP PwW Out	none	none		
2	not inst.	none	none	none		
3	not inst.	none	none	none		
4	not inst.	none	none	none		
5	not inst.	none	none	none		
6	not inst.	none	none	none		
7	not inst.	none	none	none		
8	not inst.	none	none	none		
9	not inst.	none	none	none		
10	not inst.	none	none	none		
11	not inst.	none	none	none		
12	not inst.	none	none	none		
None		Red / Red				

Figure 262 Sidepanel – Index Card UMD

For details refer to the section *Under Monitor Displays* in your Planning & Installation Manual.

7.8.3.2.7 Sat Panel

Index card for installation the Satellite Panel RSAT.



The screenshot shows a software window titled "SatPanel" with a tabbed interface. The tabs are "AuxCp", "Global", "UPK", "UMD", "GPI", "GPO", and "SatPanel". The "SatPanel" tab is selected. Inside the window, there is a table with two columns: "Setting" and "Value". The table contains two rows: "Port" with the value "5" and "Type" with the value "satpanel_v1 00". The "Port" row is highlighted in cyan.

Setting	Value
Port	5
Type	satpanel_v1 00

Figure 263 Sidepanel – Index Card Sat Panel

Select Modify to set the port number and protocol type.

7.9 System Menu

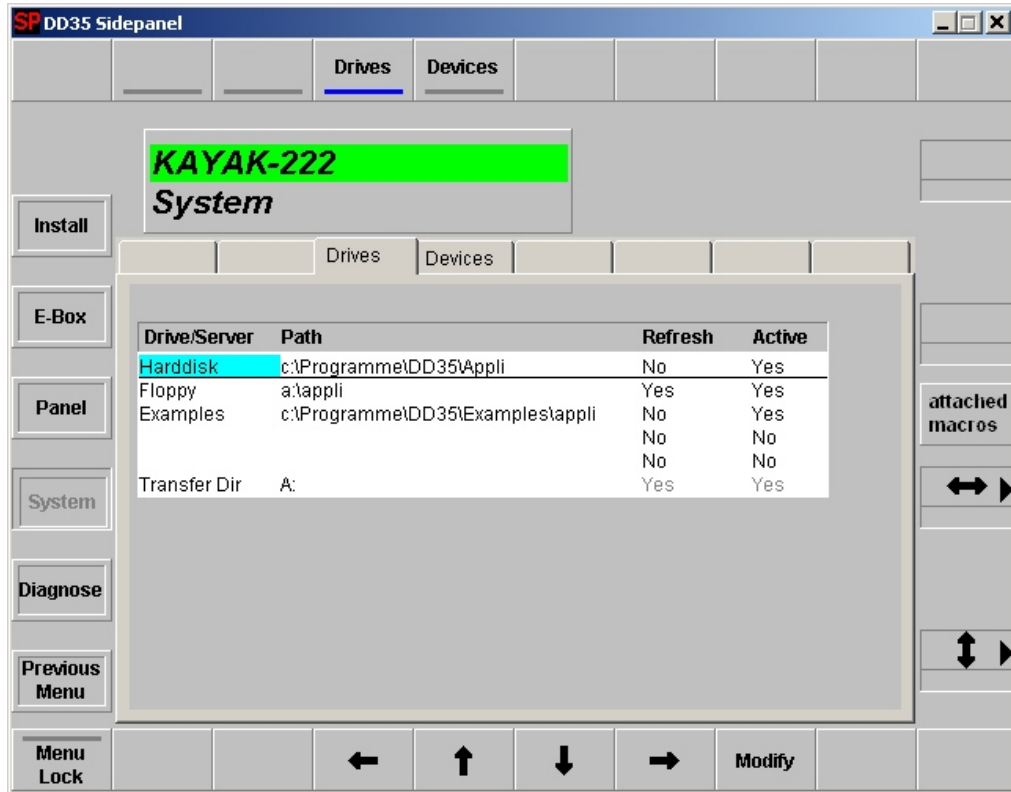
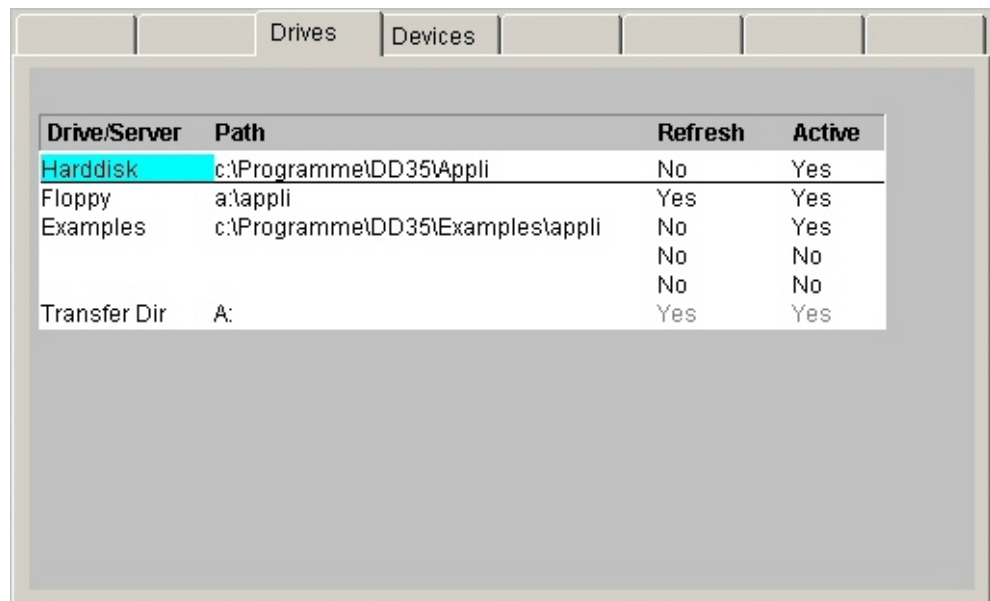


Figure 264 Sidepanel – System Menu

7.9.1 Dialog Buttons

- **Install**
Selecting Install main menu.
- **E-Box**
Selecting E–Box Install menu.
- **Panel**
Selecting Panel Install menu.
- **Diagnose**
Selecting Diagnose menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.9.1.1 Drives



Drive/Server	Path	Refresh	Active
Harddisk	c:\Programme\DD35\Appli	No	Yes
Floppy	a:\appli	Yes	Yes
Examples	c:\Programme\DD35\Examples\appli	No	Yes
		No	No
Transfer Dir	A:	Yes	Yes

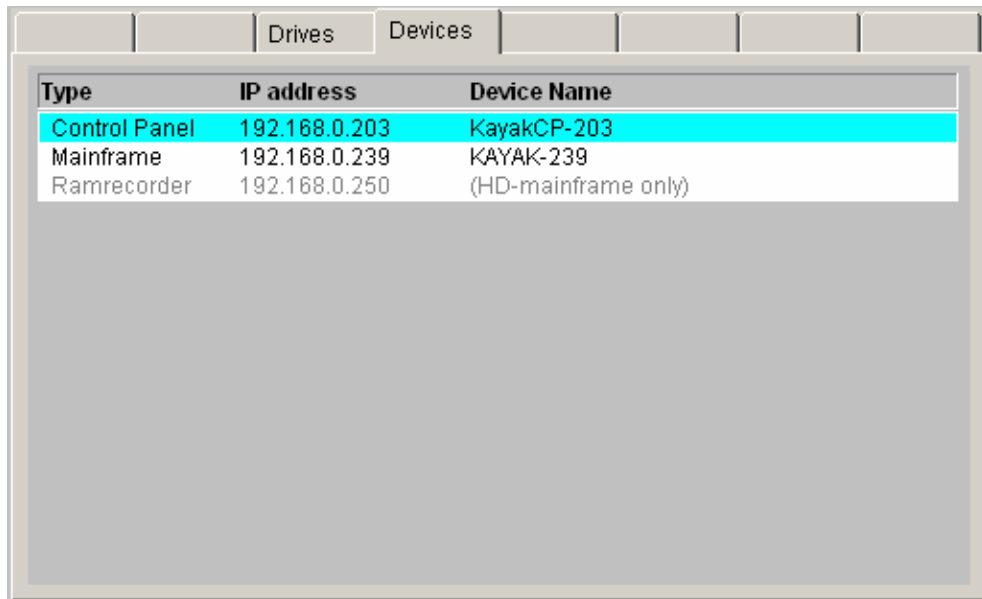
Figure 265 Sidepanel – Index Card Drives

The Drives menu defines all drives which are provided with application data on the switcher.

The drive in the top line (separated by a horizontal line from the other drives in the list) enables loading and storing applications. All other drives displayed in the list are only important for the copying procedures **Copy Config Simple** and **Copy Config Detailed**.

Drive/Server:	Name of the drive or server
Path:	Path to the application directory
Refresh:	If Yes, it can be read in again in the Copy Config dialogs by means of the Refresh button.
Active:	If Yes, the drive is displayed in the Copy Config dialogs.

7.9.1.2 Devices



Type	IP address	Device Name
Control Panel	192.168.0.203	KayakCP-203
Mainframe	192.168.0.239	KAYAK-239
Ramrecorder	192.168.0.250	(HD-mainframe only)

Figure 266 Sidepanel – Index Card Devices

The Device name of control panel and mainframe can be renamed by using the Modify button.

7.9.2 Diagnosis Menu

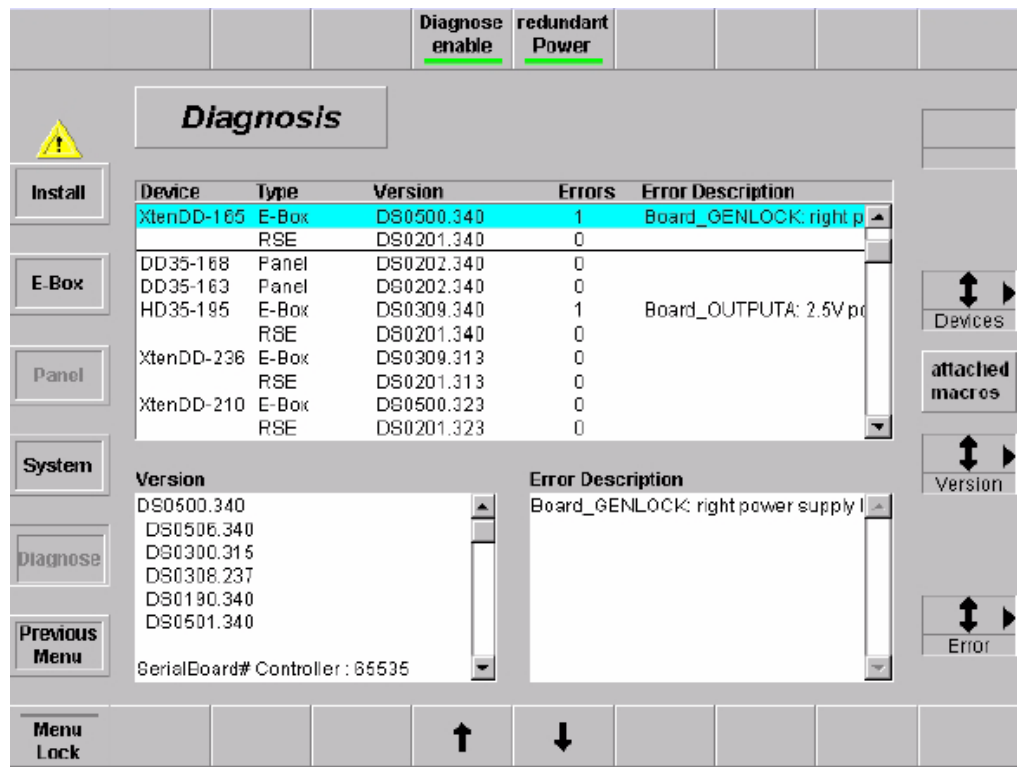
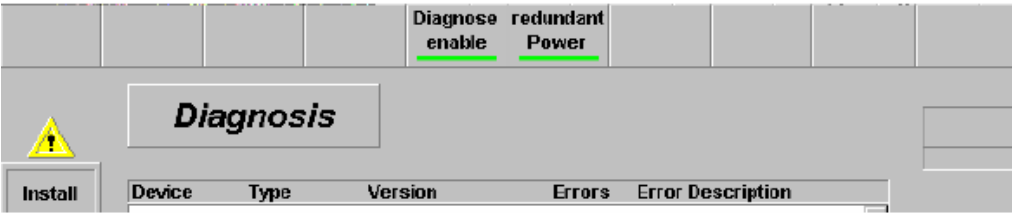


Figure 267 Sidepanel – Diagnosis Menu

7.9.2.1 Dialog Buttons

- **Install**
Selecting Install main menu.
- **E-Box**
Selecting E-Box Install menu.
- **Panel**
Selecting Panel Install menu.
- **System**
Selecting System menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.9.2.2 Enable / Disable Diagnosis Menu



- **Diagnose Enable**
Enables / Disables the diagnosis in the attached control panel and in the connected mainframe.
- **Redundant Power**
Includes / Excludes the option redundant power supply of control panel and mainframe in the diagnosis.

7.9.2.3 Possible Error Messages

Mainframe in preparation

If a local error message occurs, the alarm output conducts at the rear of the mainframe.



Additionally a yellow warning triangle is displayed in all menus. Mouse click on this warning sign opens the diagnosis menu also.

Control Panel in preparation

7.10 Configuration Menu

7.10.1 Config Main Menu

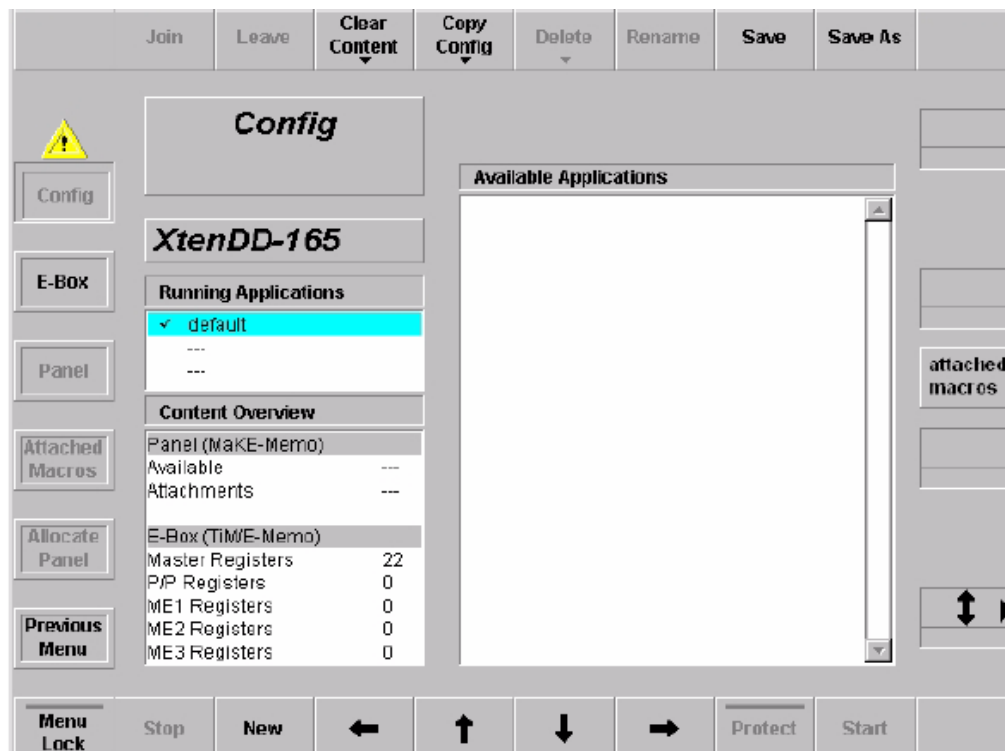


Figure 268 Sidepanel – Config Main Menu

The application main menu is designed to handle the use of applications within a switcher system. Applications can be loaded from harddisk and started, stopped, modified or created new. If an application is modified or created it is normally done online. Online in this case means that each modification done in an application menu results in an action within a switcher system – device immediately. Offline means that those modifications are only stored in files on the local harddisk.

The Application Main menu has a list of the running applications of the connected mainframe "Running Applications" and a list of stored applications on the local harddisk "Available Applications". If the menu is entered, the cursor should be on "Running Applications" and on the application, the local sidepanel belongs to.

The name of the connected mainframe is displayed in a separate display field.

The list box "**Running Applications**" displays all known running applications of the mainframe connected to the local sidepanel. It has a fixed number of entries. The "**Default**" application that is always available is the top entry. It is followed by two user-defined applications. If less than applications are running in a mainframe, the related place remains empty ("– –"). The application where the local sidepanel belongs to is marked with a hook.

The list box "Available Applications" displays all applications stored on the local harddisk. The list box has two vertical sections. At the top there is a shortcut section that shows the last four applications loaded to a mainframe. It is displayed in loading order with the latest one at the top. Below there is a complete list of all applications available on the harddisk. It is listed alphabetical.

Each entry consists of an application name, a creation date and time.

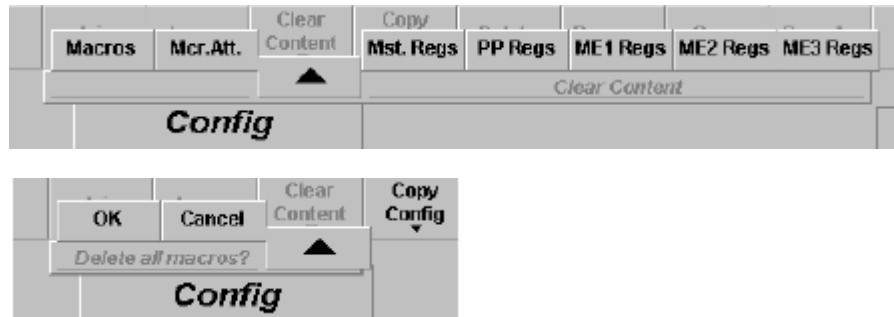
The list box "Content Overview" displays the register resources of panel (MaKE memos) and mainframe (TiM/E memo).

7.10.1.1 Dialog Buttons

- **E-Box**
Selecting Config E-Box menu.
- **Panel**
Selecting Config Panel menu.
- **Allocate Resource**
Selecting Allocate Resource menu.
- **Allocate Panel**
Selecting Allocate Panel menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.10.1.2 Function Buttons

- Join**
 This function is used to join the local sidepanel to a running application. The button is only relevant for the list box "Running Applications".
- Leave**
 This function is used to leave the application the local sidepanel is joined to. Leaving an application is identical to the function "join to default". The button is only relevant for the list box "Running Applications".
- Clear Content**
 The Clear Contents is used to delete the selected registers (MaKE memos, TiM/E memos) in the attached panel and connected mainframe.



- Copy Config**
 For details refer to section 3.16.1.3 *Copy Config*.
- Delete**
 The Delete button is used to delete complete application entries on the local harddisk. Thus it is only relevant if the cursor points to an application stored there.
- Rename**
 The rename function is apply able on running applications and on stored applications. The new application name is read with an input dialog. For stored applications it renames the application name on the local harddisk.
- Save**
 Starts saving an application on the local harddisk. The button is only relevant if the cursor points to a running application.
- Save As**
 Starts saving an application on the local harddisk after entering a new name for the application. The new application name is read by an input dialog.

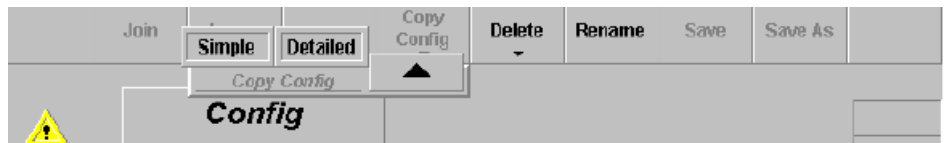
- **Menu Lock**
For details refer to section *Introduction*.
- **Stop**
Stops the running application where the cursor points to. All allocated resources are given to the default application.
- **New**
Creates a new application. The button is relevant if the cursor points to a free application entry in "Running Application" (online), or on any position at "Available Applications" (offline).
- **Cursor Up/Down/Left/Right**
The horizontal cursor buttons are used only to toggle between the two list boxes. The vertical cursor softkeys and the vertical cursor digipot are used to navigate within a list box.
- **Protect**
Write protection of the selected application in the list box "Available Applications". Protected applications are marked with a cross.
- **Start**
Loads an application from the local harddisk and starts it.

7.10.2 Copy Config

- **Simple**

To save or exchange applications or user-specific data from the switcher harddisk to a floppy or vice versa, a new Copy function with new menus is implemented.

Select the new menu in the Config menu:



Complete applications can be stored.

- **Detailed**

Single files can be stored.

7.10.3 Config Copy Simple Menu

In the Copy Simple menu, whole applications can be copied. The menu shows lists for source and destination. In the lists, the available storage devices, the stored applications or the connected devices of an application can be shown.

After copying an application from another switcher, the application might use devices which are not available here. The devices can be changed with the Change Device button.

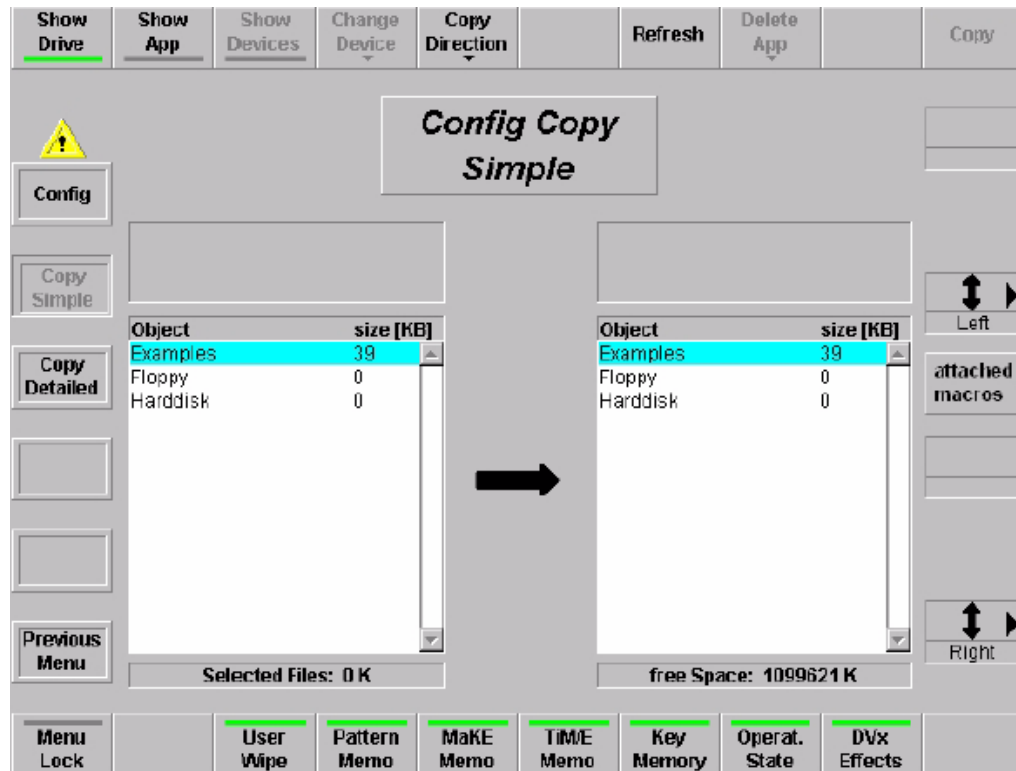


Figure 269 Sidepanel – Config Copy Simple Menu

- **Show Drive**
Internal harddisk and floppy drive are shown in the two selection areas. There are all drives listed, which are activated in the *Install / System / Drivers menu*
- **Show Application**
The applications of the selected drive are listed in the two selection areas.
- **Show Devices**
The devices of the selected application are shown.

- **Change Devices**
Allocates a different device (E-Box, Panel) for the currently selected application in the list box. A list of currently available devices is shown. Select the desired device. After copying an application from another switcher, the application might use devices which are not available here. The button is enabled only when Show Devices is selected.
- **Copy Direction**
Changing the copy direction from the left to the right and vice versa.
- **Refresh**
Reads the drive.
- **Delete App**
Deletes the selected application files from the drive.
- **User Wipe - Wipe Pattern - MaKE Memo - TiM/E Memo - Key Memory - Operation State - DVx Effects**

Buttons act as a filter for the shown application. Only the selected file types are copied.

7.10.4 Config Copy Detailed Menu

In the Copy Detailed menu, selected files can be copied between two existing applications.

The menu shows two lists for source and destination. In each list, a specific part of an application can be viewed.

NOTE!

In the copy detailed mode only one file can be copied per procedure. If you select more than one file an error message appears.

On the highest level, all drives activated in the *Install / System / Drives menu* and the Active Application are listed.

Use the Level+ and Level- buttons to navigate in the directory tree of the application. File types and files can be selected using the Select button or by double-clicking on an item in the source list box. In the destination list, the same directory level must be selected!

Press the Copy button to copy the selected file.

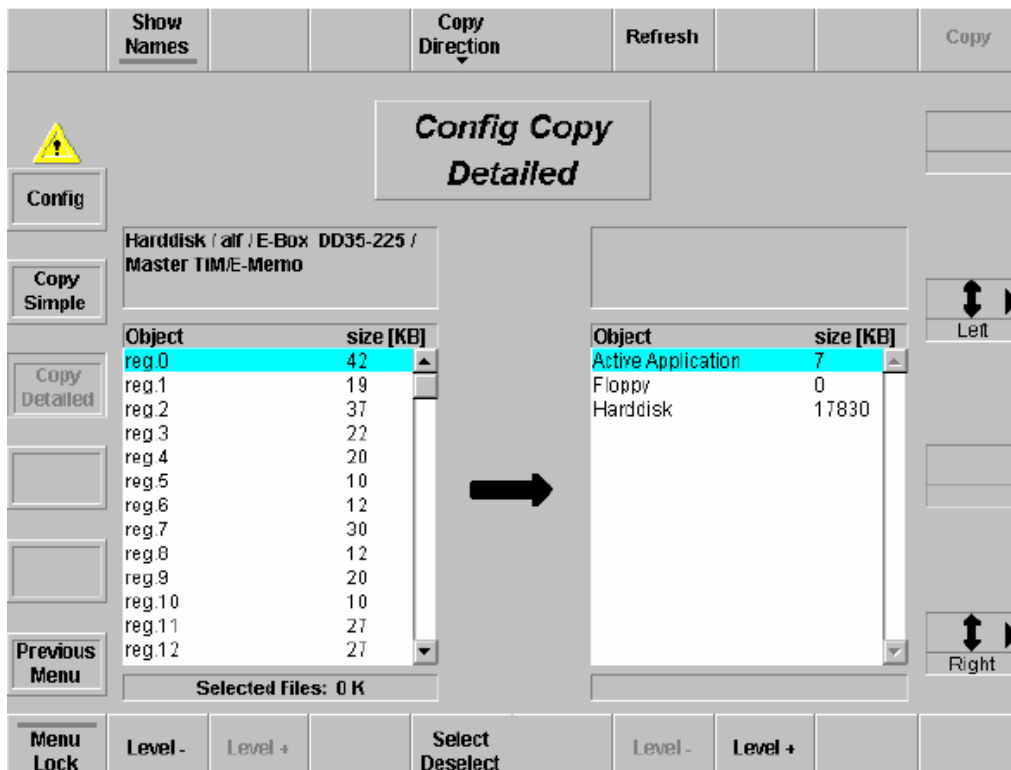


Figure 270 Sidepanel – Copy Config Detailed Menu

- **Show Names**
Shows the object names of the files.
- **Copy Direction**
Changing the copy direction from the left to the right and vice versa.
- **Refresh**
Reads the drive.
- **Level +/-**
Changing the directory level.
- **Select / Deselect**
Selects the blue marked file or file type for copying.

7.10.5 Config E-Box Menu

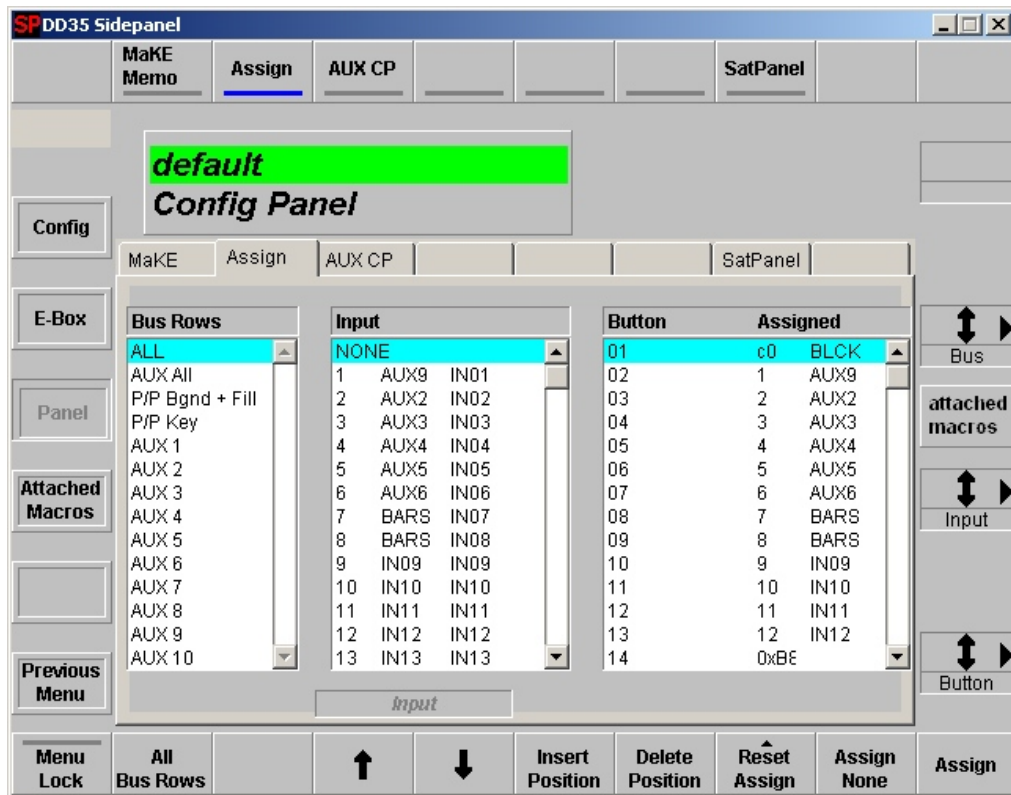


Figure 271 Sidepanel – Config E-Box Menu

7.10.5.1 Dialog Buttons

- **Config**
Selecting Config menu.
- **Panel**
Selecting Panel menu.
- **Allocate Resource**
Selecting Allocate Resource menu.
- **Allocate Panel**
Selecting Allocate Panel menu.
- **Previous Menu**
Return to the previous menu. For details refer to section Introduction.

7.10.5.2 Function Buttons

- **Menu Lock**
- **Cursor Up/Down/Left/Right**
All cursor softkeys and cursor digipots are used to navigate the cursor. The complete cursor control is always relevant.
- **Modify**
This button is only enabled if the cursor is set on an entry belonging to the own application.

7.10.5.3 Index Cards

7.10.5.3.1 Audio

Index card serves for adjustment of audio switchers via the ESAM2 protocol.

Aux Name	Aux Couple	Me Couple	SubsTab	DVE	Title																																																																																					
Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor																																																																																			
<table border="1"> <thead> <tr> <th>Audio Input</th> <th>Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>....</td></tr> <tr><td>2</td><td>....</td></tr> <tr><td>3</td><td>....</td></tr> <tr><td>4</td><td>....</td></tr> <tr><td>5</td><td>....</td></tr> <tr><td>6</td><td>....</td></tr> <tr><td>7</td><td>....</td></tr> <tr><td>8</td><td>....</td></tr> <tr><td>9</td><td>....</td></tr> <tr><td>10</td><td>....</td></tr> <tr><td>11</td><td>....</td></tr> <tr><td>12</td><td>....</td></tr> <tr><td>13</td><td>....</td></tr> <tr><td>14</td><td>....</td></tr> <tr><td>15</td><td>....</td></tr> </tbody> </table>	Audio Input	Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	<table border="1"> <thead> <tr> <th>Audio Source</th> </tr> </thead> <tbody> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> </tbody> </table>	Audio Source															<table border="1"> <thead> <tr> <th>Video Input</th> <th>Audio Input</th> </tr> </thead> <tbody> <tr><td>1</td><td>IN01</td></tr> <tr><td>2</td><td>IN02</td></tr> <tr><td>3</td><td>IN03</td></tr> <tr><td>4</td><td>IN04</td></tr> <tr><td>5</td><td>IN05</td></tr> <tr><td>6</td><td>IN06</td></tr> <tr><td>7</td><td>IN07</td></tr> <tr><td>8</td><td>IN08</td></tr> <tr><td>9</td><td>IN09</td></tr> <tr><td>10</td><td>IN10</td></tr> <tr><td>11</td><td>IN11</td></tr> <tr><td>12</td><td>IN12</td></tr> <tr><td>13</td><td>IN13</td></tr> <tr><td>14</td><td>IN14</td></tr> <tr><td>15</td><td>IN15</td></tr> </tbody> </table>	Video Input	Audio Input	1	IN01	2	IN02	3	IN03	4	IN04	5	IN05	6	IN06	7	IN07	8	IN08	9	IN09	10	IN10	11	IN11	12	IN12	13	IN13	14	IN14	15	IN15	<table border="1"> <thead> <tr> <th colspan="2">Audio Settings</th> </tr> </thead> <tbody> <tr> <td>ME</td> <td>None</td> </tr> <tr> <td>Program</td> <td>None</td> </tr> <tr> <td>Preset</td> <td>None</td> </tr> </tbody> </table>	Audio Settings		ME	None	Program	None	Preset	None
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5	IN05																																																																																									
6	IN06																																																																																									
7	IN07																																																																																									
8	IN08																																																																																									
9	IN09																																																																																									
10	IN10																																																																																									
11	IN11																																																																																									
12	IN12																																																																																									
13	IN13																																																																																									
14	IN14																																																																																									
15	IN15																																																																																									
Audio Settings																																																																																										
ME	None																																																																																									
Program	None																																																																																									
Preset	None																																																																																									

Assign Buttons
←
↑
↓
→
Modify
Add Source
Delete Source

Figure 272 Sidepanel – Index Card Audio

It is possible to define up to 64 internal audio channels. In the left list box, they are provided with a name. to each of these internal audio channels can be assigned as many audio channels as you like. They are displayed in the list box Audio Source.

The buttons Add Source and Delete Source enable to vary them. The respective internal audio channel is marked green for this purpose. To each video input can be assigned an internal audio channel. This is indicated in the third list box.

The list box Audio Settings is used to perform basic adjustments.

M/E: The audio switcher operates only on one M/E which is specified here.

Program / Preset: Audio Program and Audio Preset can be mapped on an external Aux bus.

The button **Assign Buttons** opens a second dialog page. This page enables assignment of the audio channels to the individual buttons of the external Aux busses for Audio Program / Audio Preset.

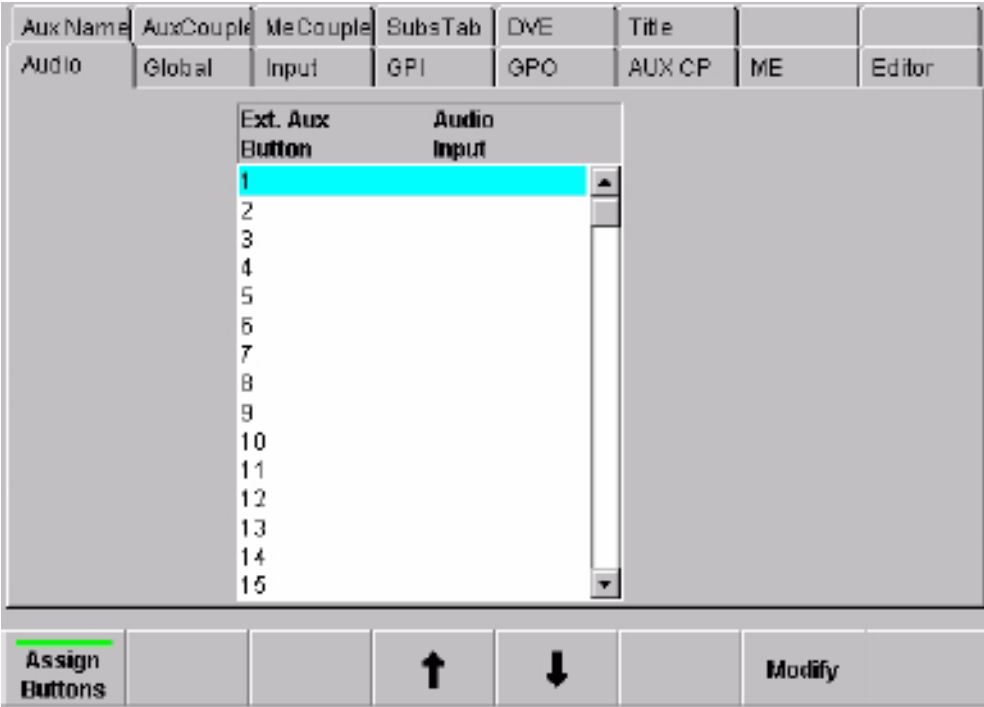


Figure 273 Sidepanel – Index Card Audio Assign

Operating:

The audio switcher follows only PGM (PST). Only PGM is always to be heard. The crossbar selection only is switched. If there is no audio assigned to the video, the last audio source stays.

CUT PGM and PST	sources swap according to the video
AUTO	works only correctly when the associated audio sources differ from each other. Otherwise, the equal audio sources are temporarily muted.
PGM/PST	<p>enables to control the two busses as EXT AUX BUSSES. When switching on these and simultaneously on the corresponding video crossbar, the principle is applied that "the last" is winning.</p> <p>With the ESAM2 protocol, transition with the fader is not possible.</p>

NOTE!

The YAHAMA DM1000 audio switcher has different Input No. as in the ESAM-2 protocol defined:

- When selecting "Video Input 1" "Audio fader input 8" is responding!***
- When selecting "Video Input 2" "Audio fader input 7" is responding!***
- When selecting "Video Input 3" "Audio fader input 6" is responding!***
- When selecting "Video Input 4" "Audio fader input 5" is responding!***
- When selecting "Video Input 8" "Audio fader input 1" is responding!***
- When selecting "Video Input 9" "Audio fader input 16" is responding!***
- When selecting "Video Input 10" "Audio fader input 15" is responding!***

7.10.5.3.2 Global

Index card for global settings.

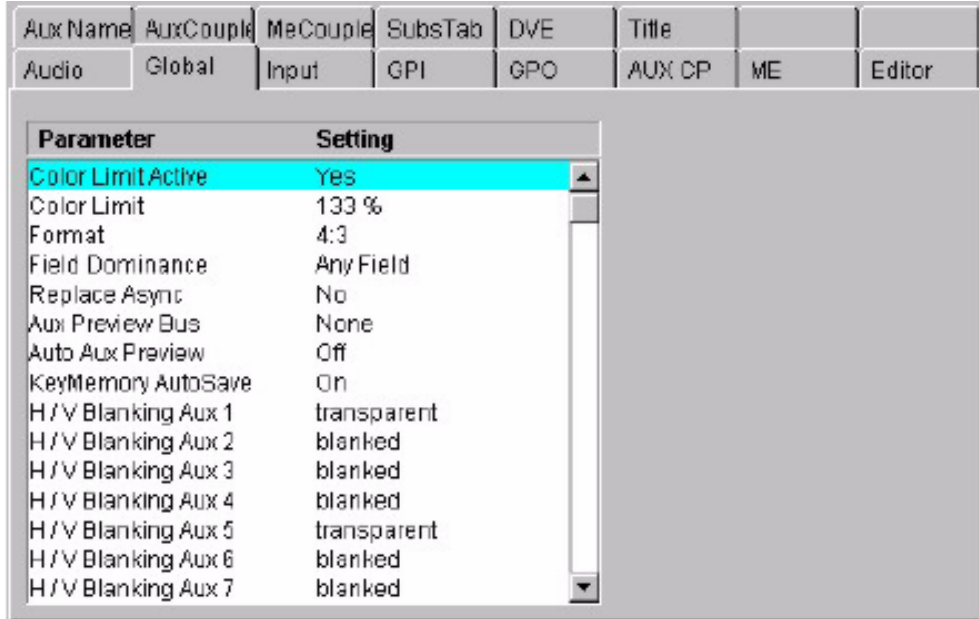


Figure 274 Sidepanel – Index Card Global

With button Modify the following parameters are selectable:

- Color Limit Active:** No /Yes
The level limitation for the internal matte signals will be switched On or Off.
- Color Limit:** Adjustable between 100 ...133 %
- Format:** 4:3 or 16:9
An M/E specific TV format selection is possible in the respective M/E menu.
- Field Dominance:** The Modify button can be used to switch over between **Any**, **Field1** and **Field2**.

The setting concerns the switching of the crosspoints on all busses, the start of auto transitions, switching with Cut and the recalling of snapshots and timelines. In position ANY switching occurs at the beginning of the next frame. In position FIELD1/2 switching or starting occurs before the corresponding field.

Replace Async:	On/Off The Modify button permits the selection of different modes for the treatment of asynchronous sources in the switching levels (M/E1, M/E2, P/P): On: If Background/Program are asynchronous, enabled keyers are disabled. If Background/Program are asynchronous and the fill signal of a keyer becomes asynchronous, the enabled keyer is disabled. If Background/Program or Preset are asynchronous and a transition is selected, a cut is performed at the end of the transition. Off: Asynchronous signals are phased over H and are passed.
Aux Preview Bus:	Selecting the desired Aux Preview Bus None, Aux1 ... Aux15
Auto Aux Preview:	On/Off Enable or disable the Auto PVW mode. In enabled condition the key PVW, mask PVW or the chroma key cursor signal of the respective mixing level is switched on the PVW bus.
KeyMemory AutoSave:	On/Off If the KeyMemo button is switched on in a Keyers menu, the key memory is always recalled if the key sources are changed during control panel operation. These changes can occur directly by selecting another key source or also indirectly by changing the Fill source or the Split mode. For storing the key settings in the key memory two modes are available: 1. Auto Save If the switch Key Memory AutoSave=On, the settings of the previous key signal are stored automatically before the settings of the next key are recalled. If the switch Key Memory AutoSave=Off, the stored settings of the new key are recalled without saving the previous settings. 2. Manual Storing Key Memory AutoSave=Off. For storing the current settings into the key memory, press the button of the respective Fill source approx. 2 seconds. The storing is confirmed by a short beep in the control panel.
H/V Blanking:	The Modify button can be used to switch over between transparent and blanked. In blanked position the V-gap and the H-gap is replaced by BLACK and the DD35-internal sync frame is added. In transparent position the information contained in the V-gap (VITS, videotext etc.) are kept. This function can be selected for each output and aux busses separately

7.10.5.3.3 Input

Index card for input settings

Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	
Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor

Input	4 char ID	8 char ID	Coupled Key		Real Input
1	IN01	IN01	c4	WHIT	---
2	IN02	IN02	c4	WHIT	---
3	IN03	IN03	c4	WHIT	---
4	IN04	IN04	c4	WHIT	---
5	IN05	IN05	c4	WHIT	---
6	IN06	IN06	c4	WHIT	---
7	IN07	IN07	c4	WHIT	---
8	IN08	IN08	c4	WHIT	---
9	IN09	IN09	c4	WHIT	---
10	IN10	IN10	c4	WHIT	---
11	IN11	IN11	c4	WHIT	---
12	IN12	IN12	c4	WHIT	---
13	IN13	IN13	c4	WHIT	---
14	IN14	IN14	c4	WHIT	---
15	IN15	IN15	c4	WHIT	---

Figure 275 Sidepanel – Index Card Input

Entries belonging to the own application are marked with a green background, entries belonging to other applications are marked with a yellow background.

- Take:** Takes the input source selected with the cursor to the own application.
- Release:** Releases the input source selected with the cursor from the own application.
- Show All:** In the on-state, all input sources are displayed. In the off-state only the own (green marked) inputs are displayed.
- Coupled Key:** Set all coupled keys to Default (=self) or White.

7.10.5.3.4 GPI

Index card for GPI settings

Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	
Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor

GPI	Name	Function	Parameter
1	GPI1	None	GPI 1 Function <input checked="" type="checkbox"/> None Command Misc ==> Autotransition ==>
2	GPI2	None	
3	GPI3	None	
4	GPI4	None	
5	GPI5	None	
6	GPI6	None	
7	GPI7	None	
8	GPI8	None	

Figure 276 Sidepanel – Index Card GPI

Double-click or pressing the Modify button calls a pop-up menu and in some cases pop-up lists.

The selected function will be triggered on the edge defined in Install menu when button GPI Enable is On. However, there are some exceptions where the GPI works as a "static" input. i.e. actions take place after a change in the GPI state but the value depends on the GPI's state after the change. Also GPI Enable needs not to be On for these functions.

GPI Functions:

None:	GPI has no function.
Command:	User-defined command code. See note below.
Misc:	<p>Switch over the Video Standard or Video Format Video Format (4x3, 16x9) Inactive = 4x3 Active = 16x9 Video Standard (625/50, 525/60) Inactive = 625/50 Active = 525/60 This is a very redundant function because the switcher can auto detect the video standard from the signal at the reference input.</p>
Auto transition:	Starting Auto Transition, selected in the pop-up list
Recall Snapshot:	Starting Snapshot, selected in the pop-up list
M/E1:	Starting function, selected in the pop-up list
M/E2:	Starting function, selected in the pop-up list
M/E3:	Starting function, selected in the pop-up list
PP:	Starting function, selected in the pop-up list
Stores:	Starting Video Store or MPR Store, selected in the pop-up list

NOTE!

In the Command mode, user defined commands are selected being transmitted to the switcher at a received trigger event. Selecting Command enables to directly enter the command code. See for this purpose the DD35 command set, which can be obtained from the manufacturer. The other selections are defined in text files GPICMDMF.TXT (mainframe) and GPICMDCP.TXT (panel). These files are contained in the directory c:/programme/dd35/bin.

For entry, a special syntax has to be considered. It is possible to add predefined parameters to the command, the available commands are listed in these files. For editing, it is best to copy and match existing entries. In any case, the DD35 command set is required.

7.10.5.3.5 GPO

Index card for GPO settings.

Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	
Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor

GPO Name	
1	GPO1
2	GPO2
3	GPO3
4	GPO4
5	GPO5
6	GPO6
7	GPO7
8	GPO8

Figure 277 Sidepanel – Index Card GPO

With the Modify button, names can be assigned to the GPOs.

7.10.5.3.6 Aux CP

Index card for configuration the Aux Control Panels connected to the mainframe.

Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title		
Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor

Aux Cp	Deleg 1	Deleg 2	Deleg 3	Deleg 4	Deleg 5	Deleg 6
1 None	None	None	None	None	None	None
2 None	None	None	None	None	None	None
3 None	None	None	None	None	None	None
4 None	None	None	None	None	None	None

Assign		←	↑	↓	→	Modify	
--------	--	---	---	---	---	--------	--

Figure 278 Sidepanel – Index Card Aux CP

Modify Opens a pop-up window with the functions that can be programmed.

Deleg 1

✓ None

2nd

3rd

AUX =>

Ext. AUX =>

ME 1 =>

ME 2 =>

ME 3 =>

PP =>

Video Store

MPR 1

MPR 2

TIME Memo =>

None: no function

2nd: This button is used as 2nd button i.e. shifts the source selection buttons

3rd:	This button is used as 3 rd button i.e. shifts the source selection buttons
AUX n - M/E Bus - P/P Bus:	This buttons delegates the AUX-CP to crosspoint selection for the given bus.
Ext. AUX n:	These buttons delegate the AUX-CP to crosspoint selection for the given external aux bus.
TiM/E Memo n:	This button delegates the AUX-CP to register recall for the given TiM/E Memo system.
Make Memo:	This button delegates the AUX-CP to Make Memo macro recall.

NOTE!

This function is not available for AUX-CPs installed at the E-Box

At least one function other than None, 2nd or 3rd must be programmed. Otherwise the AUX-CP performs no action at all.

Since the CP-3020 Aux control panel module has only two delegation buttons, Deleg 1 and Deleg 2 may be programmed with 2nd and 3rd. In this case, Deleg 3 defines the function of the AUX-CP. Deleg 4..6 can be ignored.

Button Assign:

When the Aux Control Panel is used for crosspoint selection of internal busses, the sources can be assigned freely to the source selection buttons of the AUX-CP. To do this, Assign changes the contents of the index card. See below.

The procedure for input assignment is very similar to the input assignment for the control panel.

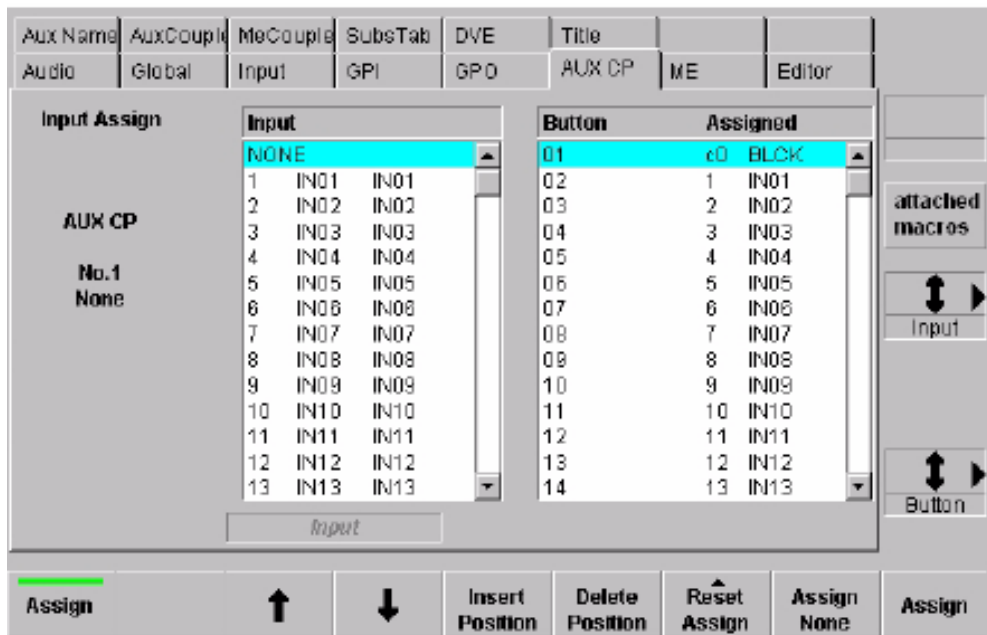
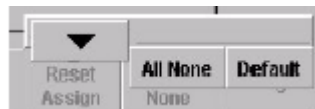


Figure 279 Sidepanel – Index Card Aux CP Assign

Button Reset Assign:



- All None:** all buttons are assigned to no input.
- Default:** sets the factory default input assign (see table below)
- = All:** sets the input assign like the input assign for bus row ALL (control panel only)
- = Aux All:** sets the input assign like the input assign for bus row AUX ALL (control panel only)

Button Insert Position:

Insert the selected input at the current cursor position and moves the previous inputs downwards to the end. At the end of the levels, the last assignment get lost!

Button Delete Position:

Deletes the selected input at the current cursor position and moves the all the next inputs upwards. At the end of the levels, a None will be inserted.

7.10.5.3.7 ME

Index card for global settings for M/E1, M/E2, M/E3 and P/P

Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	
Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor

Parameter	Setting
Operation Mode	M/E
default Preview	Look Ahead PWW
Look-Ahead PWW	On
Black Preset Abort	Off
Transition Abort	Off
FTB Cancel	Off
Auto Trans. Abort Inhibit	Off
Clean (M1CF)	CleanFeed Layer4
Util A (M1CP)	Program
Util B (M1UB)	Program
Util C (M1UC)	Video Send
Util F (M1KY)	Key Send
Enable transition trigger preset bus	Off
Enable transition trigger key1 bus	Off

M/E
☐ P/P
☒ ME1
☐ ME2
☐ ME3

Figure 280 Sidepanel – Index Card ME Settings, 1st Page

Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	
Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor

Parameter	Setting
Enable transition trigger key1 bus	Off
Enable transition trigger key2 bus	Off
Enable transition trigger key3 bus	Off
Enable transition trigger key4 bus	Off
Enable cut trigger program bus	Off
Enable cut trigger key1 bus	Off
Enable cut trigger key2 bus	Off
Enable cut trigger key3 bus	Off
Enable cut trigger key4 bus	Off
Keydrop Key 1	Off
Keydrop Key 2	Off
Keydrop Key 3	Off
Keydrop Key 4	Off

M/E
☐ P/P
☒ ME1
☐ ME2
☐ ME3

Figure 281 Sidepanel – Index Card ME Settings, 2nd Page

Edit Input Name:

Button is only active when one of the M/E Output configuration entries is selected (e.g. Util A...). The button serves to rename the input name of the respective output.

With button **Modify** the following parameters are selectable:

- Look-Ahead PVW
- Defines the signal for PVW output:
- OFF PVW output = ME output
- ON PVW output = Look-Ahead PVW
- On-Air PVW ME on air: PVW output = Look-Ahead PVW
- ME not on air: PVW output = ME output

Black Preset Abort (Enable/Disable):

When another program source is selected a currently running transition with BLK PST on will be aborted, the BLK PST button lamp turns off and the selected source is taken as program.

Transition Abort (Enable/Disable):

When another program source is selected a currently running transition will be aborted and the selected source is taken as program. Only available in non-layered mode.

FTB Cancel (Enable/Disable):

When another program source is selected an active fade-to-black will be instantly cancelled, so that the image with the selected source is visible on the stages program output. Only available in non-layered mode.

Auto Trans. Abort Inhibit:

In On state, a Auto Transition can not stopped by pressing the Auto button again.

Key Drop ...:

The selected keys will be dropped, i.e. cutout, when another program source is selected. Mainly used for DSKs.

7.10.5.3.8 Editor

Index card for editor settings.

Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	
Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor

Parameter	Setting
map P/P to	P/P
map M/E 1 to	M/E 1
map M/E 2 to	M/E 2
map M/E 3 to	M/E 3
map DSK to	P/P
map AUX 1 to	AUX 1
map AUX 2 to	AUX 2
map AUX 3 to	AUX 3
map AUX 4 to	AUX 4
map AUX 5 to	AUX 5
map AUX 6 to	AUX 6
map AUX 7 to	AUX 7
map AUX 8 to	AUX 8
map AUX 9 to	AUX 9
map AUX 10 to	AUX 10

Editor

☒ 1
 ☐ 2
 ☐ 3
 ☐ 4

Figure 282 Sidepanel – Index Card Editor

For details refer to your *Installation Manual*

7.10.5.3.9 Aux Name

Index card for aux bus name settings.

Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor
Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	
Key No	Name						
01	EX0						
02	EX1						
03	EX2						
04	EX3						
05	EX4						
06	EX5						
07	EX6						
08	EX7						
09	EX8						
10	EX9						
11	EX10						
12	EX11						
13	EX12						
14	EX13						
15	EX14						

Figure 283 Sidepanel – Index Card Aux Names

This configuration card is to be used if you want to have source names at the External Aux Bus and the router control protocol excludes the name transfer. E.g. ASCII protocol. The 4digit names occur at the external aux bus source and they are fixed for each external aux bus.

Router control protocols with a name transfer do not need the setting here. These protocols are able to grab the name from the external control unit, e.g. Prosan.

7.10.5.3.10 Aux Couple

Index card for coupling the aux bus to other switcher buses (masters). If the source on the master is changed, the source on the coupled aux bus follows.

Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor
Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	
AuxBus	Coupled To	Mode	Subst. Table				
1	None						
2	None						
3	None						
4	None						
5	None						
6	None						
7	None						
8	None						
9	None						
10	None						

Figure 284 Sidepanel – Index Card Aux Couple

Coupled To: Select the desired switcher bus

Mode:

Normal
In coupled mode, additional selection of sources on the aux bus is possible.

Exclusive
In coupled mode, additional selection of sources on the aux bus is not possible.

Subst. Table: Select the desired substitution table. Refer index card below.

7.10.5.3.11 Subst. Table

Index card for generating and editing a substitution table.

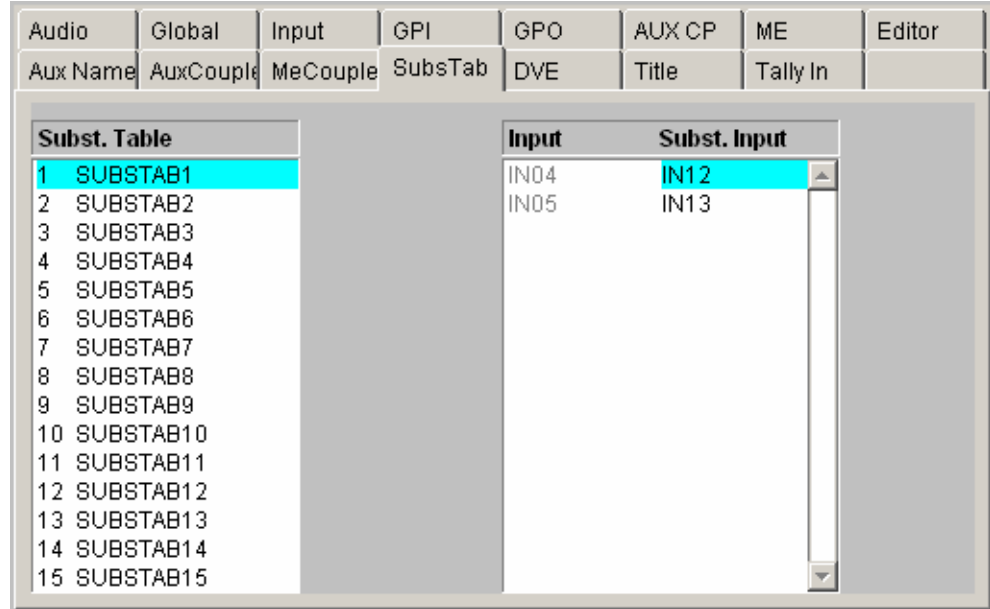


Figure 285 Sidepanel – Index Card Subst Table

The index card contains 15 substitution tables. These tables can be used by coupled aux buses or coupled M/Es to exchange the source when the coupled aux bus follows his master. Refer also Aux Couple and M/E Couple index card above.

- Modify Name:** Enter a own name for the substitution table
- All Subst:** Sets all substituted inputs to a selectable input, to white or delete all.
- Add Subst:** Enter a new substitution pair in the selected table.
- Remove Subst:** Remove a substitution pair from the selected table.
- Modify Subst:** Modify the selected table.

7.10.5.3.12 DVE

Index card for DVE settings.

Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor
Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	

Parameter	Setting
Key Bus Coupled	Off
map AUX 1 to	AUX 1
map AUX 2 to	AUX 2
map AUX 3 to	AUX 3
map AUX 4 to	AUX 4
map AUX 5 to	AUX 5
map AUX 6 to	AUX 6
map AUX 7 to	AUX 7
map AUX 8 to	AUX 8
map AUX 9 to	AUX 9
map AUX 10 to	AUX 10

DVE
☒ 1
☐ 2

Figure 286 Sidepanel – Index Card ME Settings

For DVE control, the Aux busses supplying the video and key signals have to be directly indicated in the GVG200 protocol. In order to keep an assignment variable, this index card is available enabling an Aux bus mapping. Thus, not only the permanently entered Aux busses can be used but also all the other Aux busses.

If the DVE Key and Fill source are assigned to Aux busses (that is the normal way working with the DVE) each time the DVE Fill source is changed at the Aux bus selection. The coupled key source is set on the corresponding DVE Key bus. This coupling can be activated or deactivated with the parameter Key Bus Coupled On/Off

7.10.5.3.13 Title

Index card for fixed title settings.

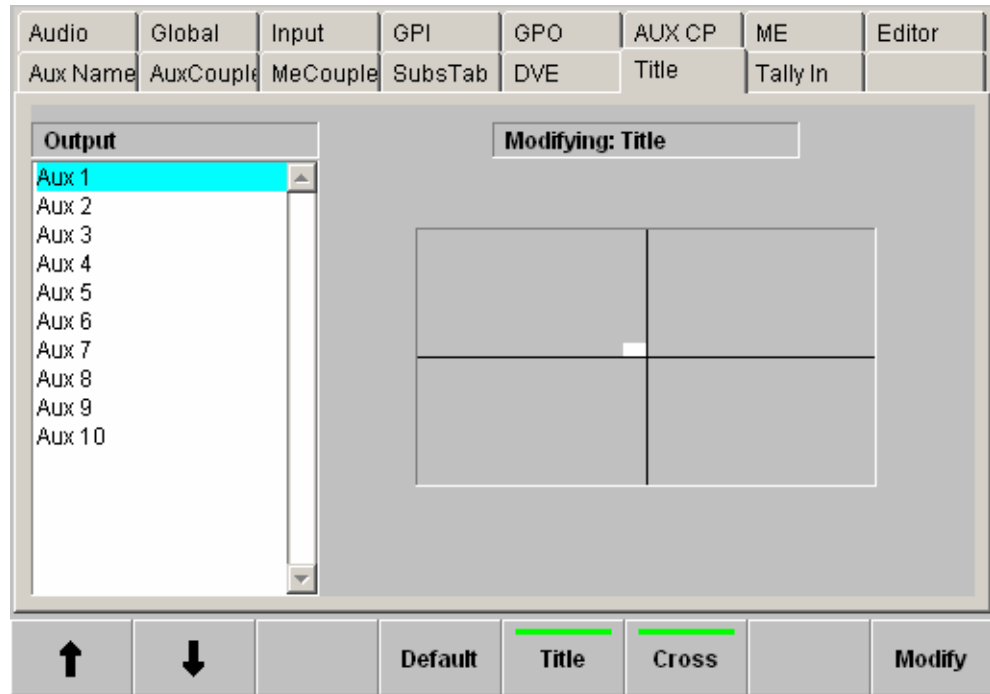


Figure 287 Sidepanel – Index Card Title

These adjusting elements enable fading-in different auxiliary lines (Box, Center Cross) into each individual Aux bus. The fading serve as an auxiliary means to mark at productions defined picture areas (e.g. areas for logos, subtitles, 4:3 raster). The digipots enable to adjust the title box or the center cross over the complete picture area.

Center: Centers the selected auxiliary line in the picture center

Title: Fades in a rectangular frame

Cross: Fades in a center cross

7.10.5.3.14 Tally In

Index card for tally in settings.

Audio	Global	Input	GPI	GPO	AUX CP	ME	Editor
Aux Name	AuxCouple	MeCouple	SubsTab	DVE	Title	Tally In	
Tally In	Red Tally	Green Tally	Yellow Tally				
Aux1	active	---	---				
Aux2	---	---	---				
Aux3	---	---	---				
Aux4	---	---	---				
Aux5	---	---	---				
Aux6	---	---	---				
Aux7	---	---	---				
Aux8	---	---	---				
Aux9	---	---	---				
Aux10	---	---	---				
Ext Dsk1	---	---	---				
Ext Dsk2	---	---	---				
Ext Dsk3	---	---	---				
PP Main	active	---	---				
ME1 Main	---	---	---				

Figure 288 Sidepanel – Index Card Tally In

7.10.6 Config Panel Menu

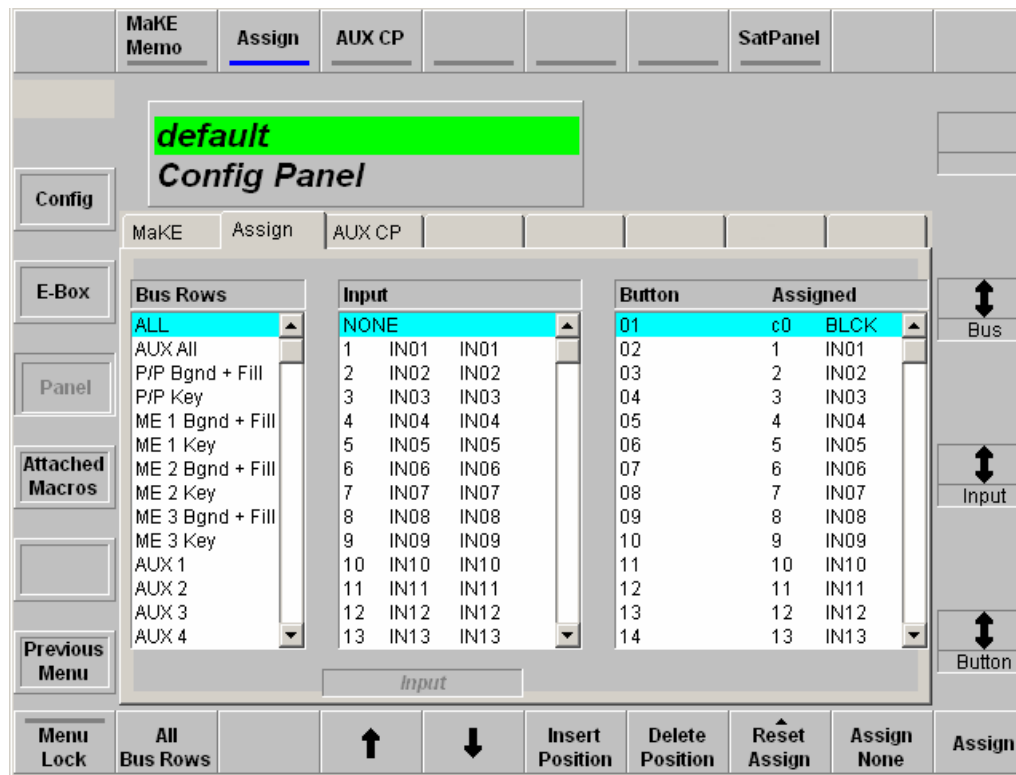


Figure 289 Sidepanel – Config Panel Menu

7.10.6.1 Dialog Buttons

- **Config**
Selecting Config menu.
- **E-Box**
Selecting Config E-Box menu.
- **Attached Macros**
Selecting Attached Macro menu.
- **Allocate Panel**
Selecting Allocate Panel menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.10.6.2 Function Buttons / Index Cards

7.10.6.2.1 Make Memo

Make Memo can store commands as macros (e.g. Cut, Auto, GPO trigger, etc.). By inserting Pause between commands it can also store a macro sequence. The difference between *TiM/E Memo* with snapshots and timelines to *Make Memo* is, that *TiM/E Memo* store states and sequences of states, *Make Memo* stores commands and sequences of commands.

For recall the stored macros the PP source selection panel is used. The MaKE button delegates the PP keyer bus to the *Make Memo* function.

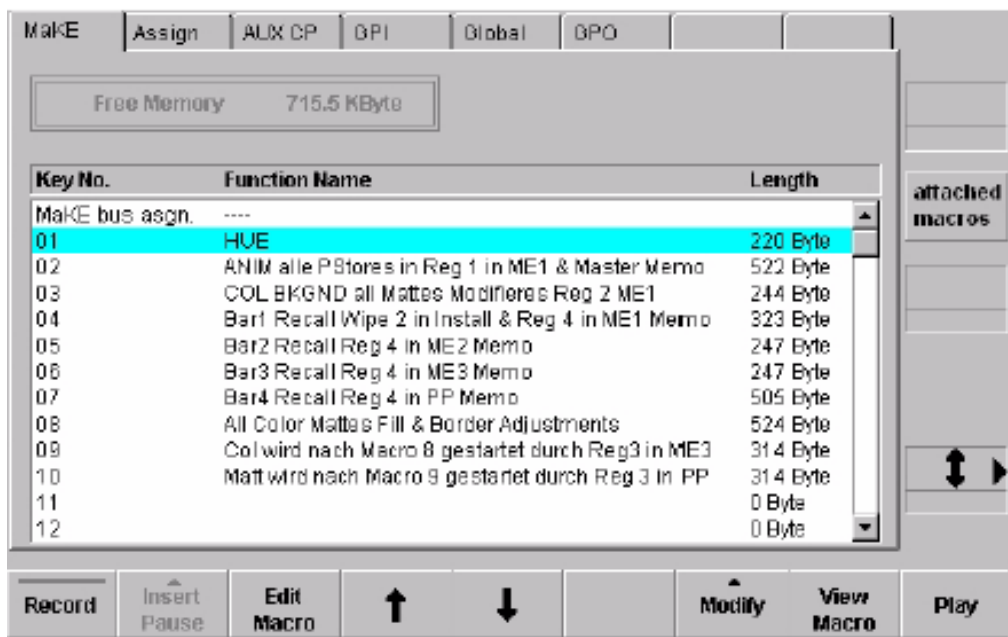


Figure 290 Sidepanel – Index Card MaKE

- **Record**
Start and stop recording macros.
- **Insert Pause**
Only active, if Record button is selected.



- **Edit Macro - View Macro – Modify**
For details refer next section Macro Editor.
- **Cursor Up/Down**
The vertical cursor softkeys and the vertical cursor digipot are used to navigate within a list box. The complete cursor control is always relevant.

How to Store a Macro:

Make sure that in the Config menu the Running Application is selected to which you want to add the macros. If the cursor is not on a Running Application the menu item menu is disabled.

Select with the cursor button, the digipot or by mouse click a free Key No. in the Make Memo list field.

Push Record button to start recording the macro. Push the desired control panel buttons and adjust the desired digipots. If a pause is needed between commands, push the Insert Pause and select the desired time (0.5, 1.0, 2.0, 3.0 or 5.0 in seconds), then proceed with the commands. At the end of the macro push Record again to stop recording.

NOTE!

If no pause is inserted all commands were executed immediately.

If you want to rename the stored commands push Modify and select Rename in the overlay. Type in the name with the keyboard overlay.

To copy a macro to another Key No. select the macro and push Modify. Select Copy in the overlay. Type in the desired Key No. and confirm with Enter.

Macros can also be swapped by selecting Swap in the Modify overlay.

To delete a macro select the macro in the list, push Modify and select Delete.

It is possible to assign other busses to the Make buttons in the control panel., e.g. Aux busses. Select Key All and push Modify. Select from the overlay the bus you want to assign to these buttons.

- **Transfer Key**
Transfer the selected macro from one button to another.

7.10.6.2.2 Assign

Index card for Input Assignment. The menu is selectable only when a control panel is attached. Only a user with permit "APPLICATION MODIFY" can make changes.

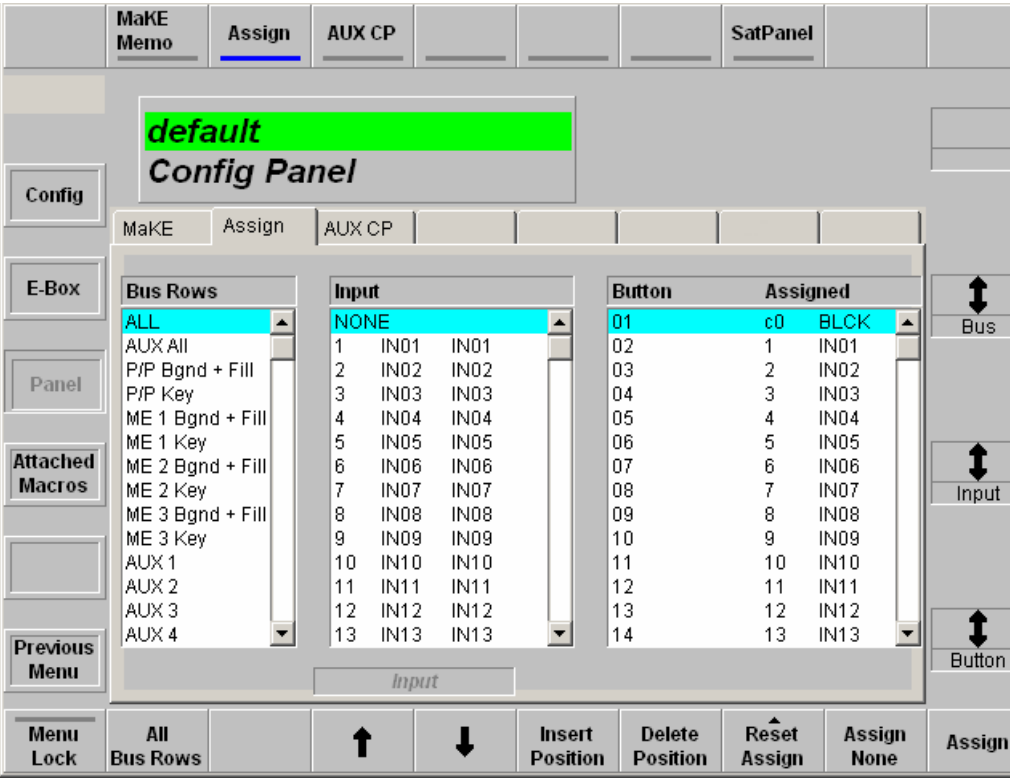


Figure 291 Sidepanel – Index Card Config Panel

Box Bus Rows: Pre-selects the panel's bus rows for which the Input Assignment should be changed.

Selectable are:
ALL (= all bus rows on the panel),
P/P-Bgnd + Fill,
P/P-Key,
AUX All,
AUX 1 ... AUX 10

NOTE!
Extern AUX is NOT selectable.

Box Input: Shows a sorted list of all assignable inputs (Number, four char ident, eight char ident) plus the entry None which must be used to assign no input to a button. The arrow in the rightmost column indicates the input that is assigned to the button which is currently marked in the box Button.

- Box Button:** Shows a sorted list of all assignable crosspoint buttons. The arrow in column 1 indicates the buttons which are assigned to the input currently marked in box Input. Column 2 is the numeric list of all buttons. Column 3 is a helper to show whether the Button is in first 2nd or 3rd level. Column 4 and 5 show the number and the four char ident of the assigned input. Dashes (– – –) indicate that no input is assigned.
- All Bus Rows:** Shortcut for pre-selecting bus row ALL.
- Cursor Up/Down:** The vertical cursor softkeys and the vertical cursor digipot are used to navigate within a list box. The complete cursor control is always relevant.
- Insert Position:** Insert the selected input at the current cursor position and moves the previous inputs downwards to the end. At the end of the levels, the last assignment get lost!
- Delete Position:** Deletes the selected input at the current cursor position and moves the all the next inputs upwards. At the end of the levels, a None will be inserted.

- **Reset Assign**

Resets the assignment to the following states:



Opens an overlay with some pre-defined input assignments:

Like Bgnd Copies the input assignment from the Bgnd bus row into the key bus row (only for key buses):

- Like AUX All: Copies the input assignment from the AUX All bus row into the selected bus row.
- Like ALL Copies the input assignment from the ALL bus row into the selected bus row.
- Black Left Makes a default assignment with input Black on the leftmost button.
- Black Right Makes a default assignment with input Black on the rightmost button.
- All None Assigns no input to all buttons of selected bus row.

- **Assign None**

Moves the cursor in the right table downwards.

- ***Assign*** Moves both cursors downwards.

7.10.6.2.3 AUX CP

Index card for configuration the Aux Control Panels connected with the switcher control panel.

Make	Assign	AUX CP	OPI				
Aux Cp	Deleg 1	Deleg 2	Deleg 3	Deleg 4	Deleg 5	Deleg 6	
1 cp330	None	None	None	None	None	None	
2 cp330	None	None	None	None	None	None	
3 cp330							
4 cp330							
5 cp330							
6 cp330							
7 cp330							

Figure 292 Sidepanel – Index Card Aux CP

Modify: For details refer to *Config E-Box Menu*.

Delegation:

Pressing a delegation button delegates the AUX-CP to that function. The delegation button is lit to indicate that status. If possible, the source buttons show the current status of the delegated function. In most cases, this will be the selected crosspoint on the delegated bus. If the function is TiME Memo recall or Make Memo recall, no state is indicated because such recalls are events.

2nd, 3rd:

Pressing a delegation button that is programmed to be 2nd or 3rd toggles the shift level of the source buttons.

2nd	3rd	Source buttons CP-300	Source buttons CP-330	Source buttons CP-3020
off	off	1 .. 24	1 .. 48	1 .. 20 (+ 20 per CP 3021)
on	off	25 .. 48	25 .. 62	21 .. 40 (+ 20 per CP 3021)
off	on	49 .. 72	49 .. 96	41 .. 60 (+ 20 per CP 3021)
on	on	not allowed		

Source Buttons:

Pressing a source button performs the function according to the delegation. I.e., selects the crosspoint or recalls the register or macro.

The response to a recall is a short flash of the source button. The response to a crosspoint selection is the indication of the new crosspoint.

AUX-CP Enable:

In menu Remote, the AUX-CPs can be enabled or disabled. In disabled state, the AUX-CP performs no function. Local delegation is still possible.

7.10.6.3 Macro Editor

- **Edit Macro**

Pressing the button actually enters a sub-dialog of the MaKE page (see below).

View Macro Pressing the button enters the same dialog as “**Edit Macro**”, but without any buttons to change the contents

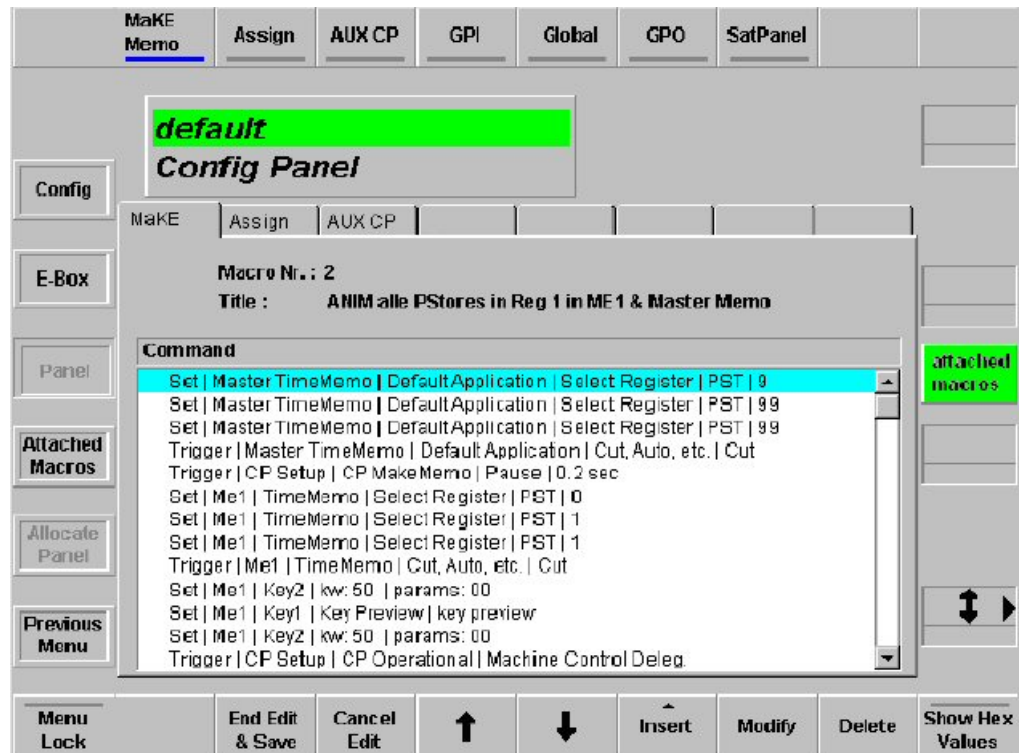


Figure 293 Sidepanel – Index Card MaKE

SubDialog Macro Editor:

End Edit & Save: Pressing the button saves the actual changes made in the macro editor and returns to the MaKE dialog.

Cancel Edit: Pressing the button discards changes made in the macro editor and returns to the MaKE dialog.

Insert:



Insert new comm. at select.

Insert an empty command line before the selected command.

Insert new comm. at end

Insert an empty command line after the last command.

Insert exist. macro at select.

Insert an existing macro before the selected command.

Insert exist. macro at end

Insert an existing macro after the last command.

Modify

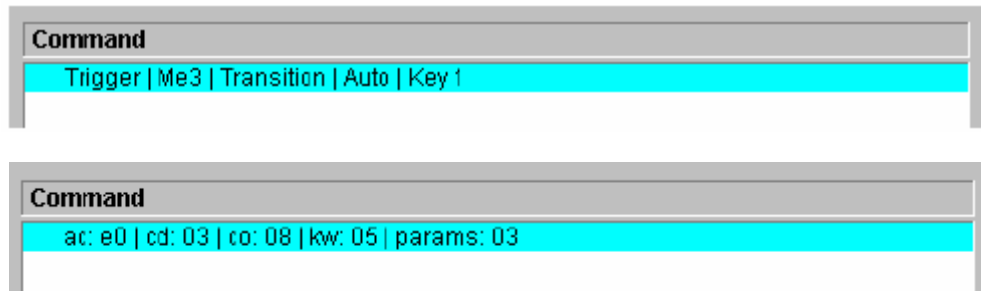
Pressing the button modifies selected command (or empty command line).

Delete

Pressing the button deletes selected command (or empty command line).

Show Hex Values

Pressing the button toggles the display between normal text mode and technical mode showing the command in hexadecimal code:



Principles of the Macro Editor:

Make	Assign	AUX CP	GPI	Global	GPO		
------	--------	--------	-----	--------	-----	--	--

Macro Nr. : 2
Title : MK02

Command
Set Me1 Transition Transition Type Key 1 mix
Set Me1 Transition Transition Time Key 1 12
Trigger Me1 Transition Auto Key 1

With the macro editor you can view and edit the contents of a macro. You can delete commands from the macro by just pressing the delete button. Insert a command can be done in two ways:

- Insert an empty command line and modify this line directly in the command editor.
- Create a (temporary) macro with the commands needed on the control panel and insert this macro.

Inserting an existing macro is the simpler way to add commands, however creating command directly in the editor gives you more flexibility.

Creating/changing commands with “Modify”:

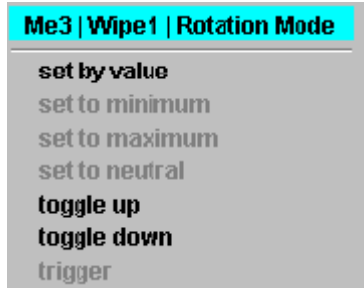
When you press the Modify button, a sequence of pop-up windows appears allowing you to create the command you want.

Example for a pop-up selection:

Select Main Group		
ME's & PP -----	Auxbuses -----	Peripheral Devices ---
Me1	Auxbus	Aux CP
Me2	AuxBus Correction	SatPanel
Me3	Ext-AuxBus Setup	UMD
PP		
General Resources ----	Setups -----	External Controls ----
Color Background	SidePanel	Edit Control
DVE	CP Setup	PBus
Stores	MF Setup	Saturn
Master TimeMemo	Source Substitution	Esam
Machine Control	XBarIdent	Autom. Control
Video input	GPI	
	GPO	
	Serial Ports	
	Tally	
	Applic. Setup	

Depending whether the command deals with a switch value, an analog value, or an event you will find one of the following selection pop-ups:

Switch value (e.g. Wipe Rotation Mode):



Set by value

Sets rotation mode to a fixed value.
Next selection will be: Angle / Speed / Coupled

Toggle up

When you execute this macro, the result depends on the actual state:
when Angle > Speed
when Speed > Coupled
when Coupled > Coupled
some parameters allow "wrap around".
In this case Coupled would change to Angle.
"On/Off" parameters always allow "wrap around".

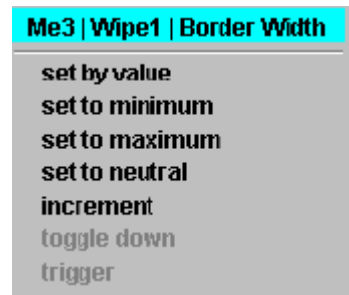
Toggle down

When you execute this macro, the result depends on the Actual state:
when Coupled > Speed
when Speed > Angle
when Angle > Angle
some parameters allow "wrap around".
In this case Angle would change to Coupled.
"On/Off" parameters always allow "wrap around".

When you learn macros via the control panel, you will find out that some commands are learned as "set by value" and others by "toggle" (e.g. "on/off" command).

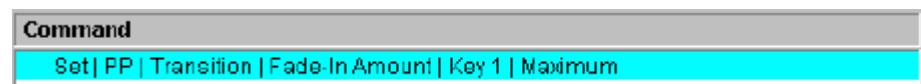
When you create the commands directly in the command editor you have the choice to select the way most convenient to you.

Analog value (e.g. Wipe Border Width):



set by value	Sets border width to a fixed value. Next selection will allow you numeric entry.
set to minimum	Sets the border width to minimum
set to maximum	Sets the border width to maximum
set to neutral	Some analog value like the border width have a symmetrical range (+/-). Set to neutral selects the middle position.
increment	Allows you to create a macro which increases/decreases the value by a certain amount any time you execute the macro. Analog commands can only be created directly in the command editor. Via the control panel you can not learn analog macros.

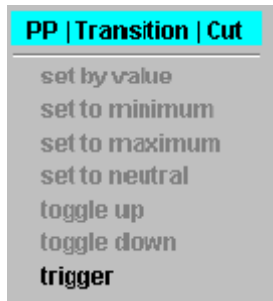
An interesting analog macro could be e.g. the following:



This macro will always set Dsk1 to “on”.

A macro learned on the control panel with “Cut” or “Auto” instead will toggle the state of the Dsk.

Event (e.g. Transition Cut):



trigger For this type there is only one selection possible:
to trigger the event

7.10.7 Attached Macros Menu

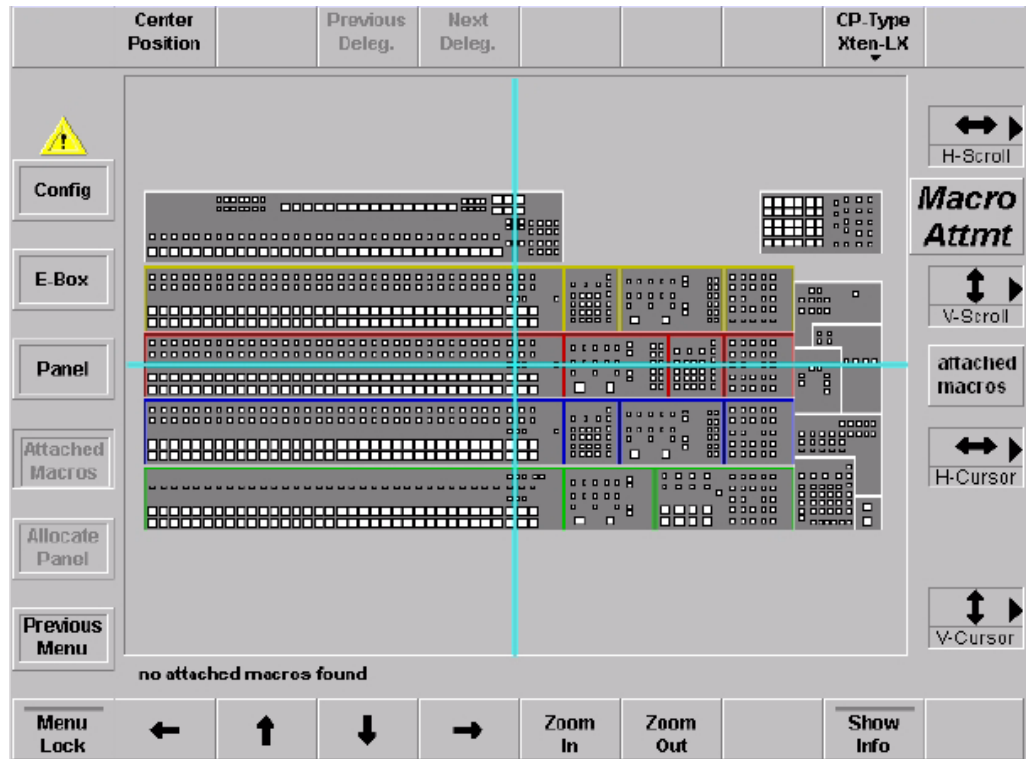


Figure 294 Sidepanel – Attached Macros Menu

7.10.7.1 Dialog Buttons

- **Config**
Selecting Config menu.
- **E-Box**
Selecting Config E-Box menu.
- **Attached Macros**
Selecting Attached Macro menu.
- **Allocate Panel**
Selecting Allocate Panel menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.10.7.2 Viewer for Attached Macros

This menu can be accessed in two ways:

via *Config / Attached Macros* menu by clicking to “attached macros” button,



which is visible in all menus at the right side between the middle digipots. This button is only visible when there is at least one macro attachment. The button is grey or green, depending on the settings in the menu *Personality / Panel / MaKE Memo Attachment Playmode*.

7.10.7.3 Principles of Macro Attachment

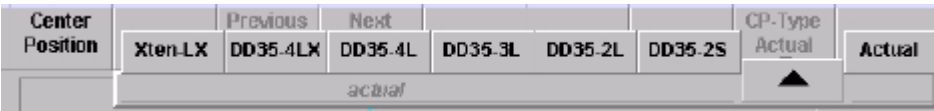
Macros can be recalled manually via the macro bus row (Keyer row in Program/ Preset) and via the sidepanel. A more sophisticated way is to recall a macro automatically when you press any other button on the panel. Since a normal button has its own function, you can attach a macro which is executed BEFORE the actual function (pre-macro) and/or a macro which is executed AFTER the actual function (post-macro).

The macros are not attached to the physical buttons, but to the logical buttons. That means, when you attach a macro to the first button in the Aux bus row while the auxbus delegation is on Aux bus 5 and second page is selected, this macro is only fired at the button press for this special setting.

Center Position:	Centers the display and the cursor
Previous Deleg.:	Toggles the info display backwards through the different delegations. Only enabled for buttons with more delegation levels (e.g. Aux bus row buttons, Keyer section buttons).
Next Deleg.:	Toggles the info display forwards through the different delegations. Only enabled for buttons with more delegation levels (e.g. auxbus row buttons, keyer section buttons, wipe selection buttons).
CP-Type:	The default panel type to display is of course the actual panel type. You can select all other panel types in case you want to export your application to another type of panel. Since panels differ in button layout some button of type A may not exist on panel type B. Macro attached to this buttons will be shown as “not decoded macros” for panel type B.

Available panel types:

Selects automatically the connected panel type!



Left/Right/Up/Down Arrow:

Scrolling the display in the according direction.

Zoom In:

Zoom in display. Starting from a certain zoom factor the text labels per button are displayed.

Zoom Out:

Zoom out display.

Show Info:

If “on” the “info popup window” is shown whenever the cursor (blue crosshair) is over a button. If “off” the “info popup window” is only shown as long as you hold down the left mouse button on the according button. The 4 digipots also allow to scroll the display and to move the cursor (blue crosshair).

Attachment Display:

If a macro is attached to a button in a certain section (e.g. Aux row, M/E1 row) this section is displayed with a yellow background. The buttons with attached macros are displayed in red.

To see the details of the attachment, move the cursor to the according button (or click on it) to open the “info popup window”. Here you will see for which delegations and which pages pre- and/or post-macros are attached with the name and the number of the macro.

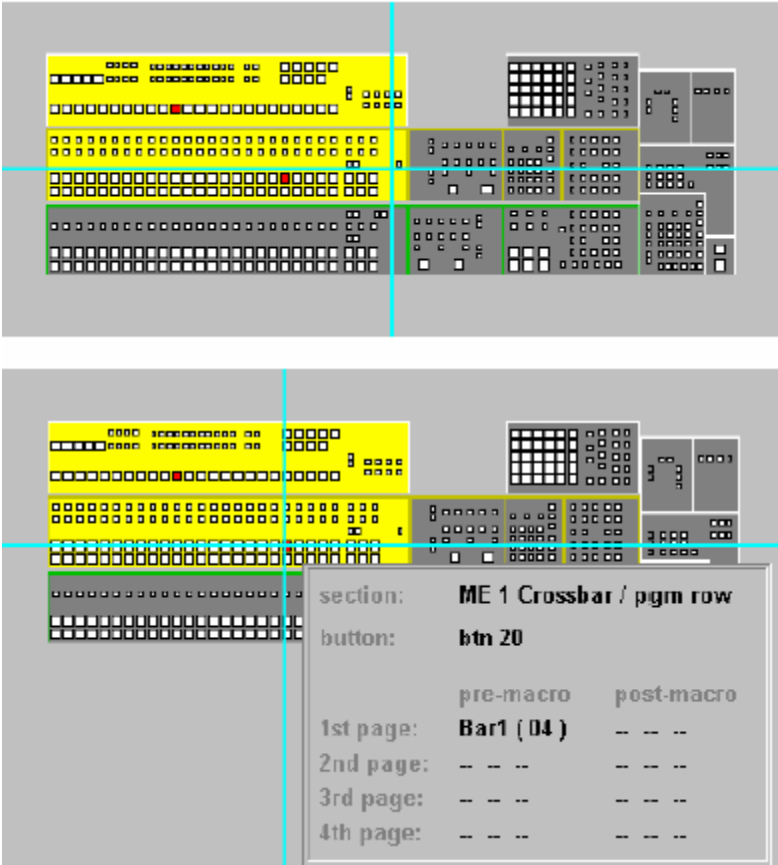


Figure 295 Sidepanel – Attachment Display

7.11 Personality Menu

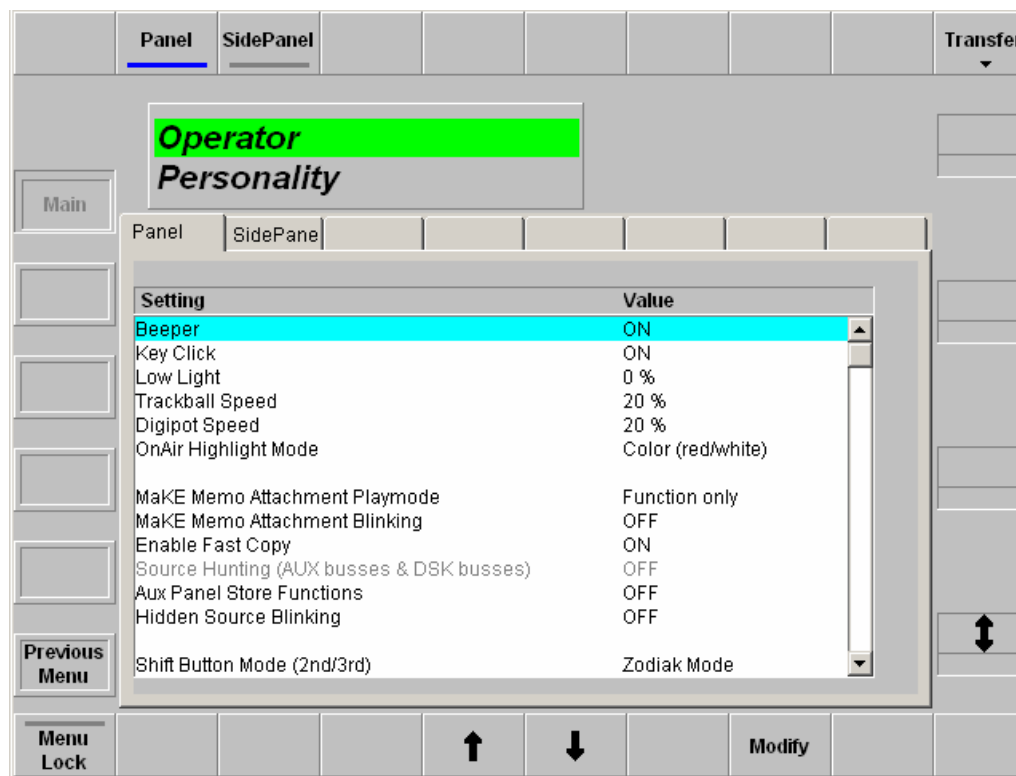


Figure 296 Sidepanel – Personality Menu

The menu permits personality settings for the panel and sidepanel (PC and display).

With the **Transfer** button, the settings can be saved (Export) on a diskette or loaded (Import) from a diskette.



7.11.1.1.1 Panel

Index card for panel settings.

Setting	Value
Beeper	ON
Key Click	ON
Low Light	0 %
Trackball Speed	20 %
Digipot Speed	20 %
OnAir Highlight Mode	Color (red/white)
Make Memo Attachment Playmode	Function only
Make Memo Attachment Blinking	OFF
Enable Fast Copy	ON
Source Hunting (AUX busses & DSK busses)	OFF
Aux Panel Store Functions	OFF
Hidden Source Blinking	OFF
Shift Button Mode (2nd/3rd)	Zodiak Mode

Figure 297 Sidepanel – Index Card Panel, 1st Page

Setting	Value
Flip-flop 2nd/3rd for PGM/PST	OFF
PP-Key (2nd/3rd) Follow Bgnd (2nd/3rd) (2S-Panel)	OFF
Macro Edit Buttons (2S Panel)	OFF
Simulcast UPK Mode	Latch Mode
X-Bar AuxBus Delegation	ON
X-Bar to Side Panel Delegation	ON
AutoMenu: Control Panel => Side Panel	ON
AutoDelegation: Side Panel => Control Panel	ON
AutoDelegation: RSat Panel => Control Panel	ON
Trans. DVE Menu Delegation	ON
Trans. Key Menu Delegation	ON
Trans. ME Menu Delegation	ON
Trans. Wipe Menu Delegation	ON

Figure 298 Sidepanel – Index Card Panel, 2nd Page

Use Modify button to set your settings.

7.11.1.1.2 SidePanel

Index card for sidepanel settings.

Panel		SidePanel						
Setting		Value						
TFT Intensity		100 %						
Popup Time		0 s						
Overlay Time		5 s						
Timeline Edit Direct Modify		off						
Main Page for WIPE		(after Sidepanel Restart)	Adjust					
Main Page for Mediaplayer		(after Sidepanel Restart)	Extern MP					
Main Page for DVE		(after Sidepanel Restart)	Extern DVE					
Switcher Type for Demo-Mode		(after Sidepanel Restart)	XtenDD SD					

Figure 299 Sidepanel – Index Card SidePanel

Use Modify button to set your settings.

7.12 TiM/E Memo Menu

7.12.1 TiM/E Memo Select Menu

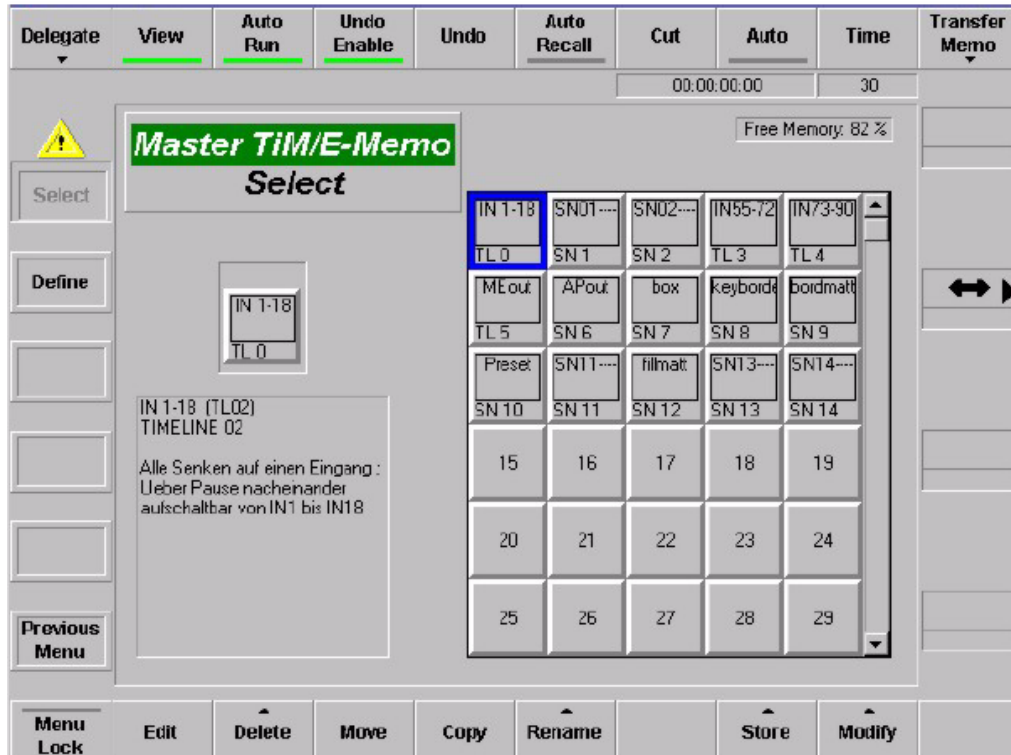


Figure 300 Sidepanel – Master TiM/E Memo Menu

The Select menu enables to directly select the individual register 0 ... 99. The info field on the left side displays the short name, the long name and the text of the register just marked with the cursor frame.

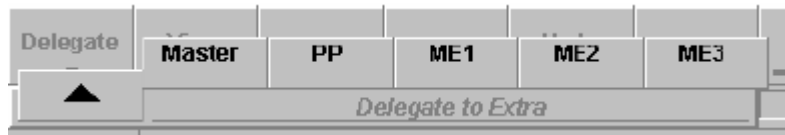
7.12.1.1 Dialog Buttons

- **Define**
Selecting the Define menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.12.1.2 Function Buttons

- **Delegate**

If this button is pressed, the user can select another TiM/E Memo to go to. So it is possible to switch over to the PP, M/E1, M/E2, M/E3 or Master TiM/E Memo Select Menu.



Note – TiM/E Memo edit menu:

If a M/E is in Edit mode and if the M/E changed with the Delegate button to a M/E which is in Select mode, the menu remains in edit mode and vice versa.

The M/E cannot be changed with the TiM/E Memo menu button on the right side of menu display.

- **View**

On: If the user is going to edit a timeline, then he will see the results of his modifications and cursor movement in the video, i.e. if a keyframe or snapshot object will be selected, it will be recalled and displayed in the video.
Off: If the user is going to edit a timeline, then he will not see the results of his modifications and cursor movement in the video, i.e. the state of any object and the video will not be affected.

- **Auto Run**

When Auto Run is switched off, the timeline is played completely and only stopped when a “Wait” is inserted into the timeline.

When Auto Run is switched on, only the first keyframe of the timeline is recalled, thereafter the timeline is stopped until the user continues the timeline with Continue. Subsequently it continues running normally.

- **Undo Enable**

If this button is pressed, the state before the last recall or timeline play is restored.

- **Undo Enable/Disable**

For special application, the Undo function can be disabled. If Undo disabled, no undo state is stored before snapshot recalls and playing timelines. Recalling the undo state is therefore not possible. The reason for disabling the Undo feature is, that it saves time before snapshot recalls.

- **Auto Recall**

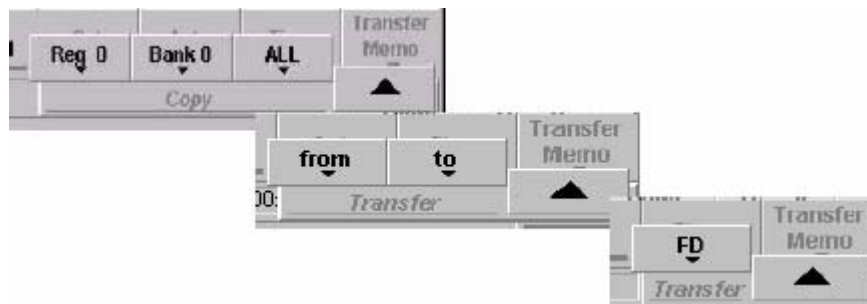
If this button is pressed, snapshots and timelines will be recalled / played as they were stored or edited, i.e. they will not be filtered through the currently adjusted define memo. The define memo is changed after a snapshot recall / timeline play to that define memo which is implicitly stored within snapshots and timelines. Starts playing a selected timeline immediately.

- **Cut**
 - If snapshot selected: Recall
 - If timeline selected: Timeline Play
- **Auto**

If this button is pressed and a snapshot is selected, a dissolve operation with the Auto transition time for this snapshot will be done. If a timeline is selected and then the Auto button is pressed, the selected timeline will be played in the given Auto Time. While the dissolve or auto play operation the button LED is on. Timelines containing endless loops or waiting for an event (GPI, time) can't be played with Auto.
- **Time**

If this button is pressed, the user can adjust the Auto Time for snapshot dissolves and timeline auto play and the default transition time for keyframes in timelines.
- **Transfer memo**

If this button is pressed, the user can save the contents (snapshot or timeline) of a registers (Reg1 .. 99) to a floppy disk (FD) or load data into a register.



- **Menu Lock**

Locks the current menu.
- **Edit**

Selecting the Edit menu and enabling the edit function for the register selected with the blue cursor frame. For details refer to section Edit Menu.
- **Delete**

Deletes the register selected with the blue cursor frame.
- **Move**

Moves a snapshot from one register to another. If the destination register already contains a snapshot or timeline, both register contents will be changed.

- **Rename**

Renames the currently selected register. The user can rename the 4, 8 and 20 character names and change the 256 character comment.



- **Store**

Stores the currently in Define Memo enabled entities to the selected (blue cursor frame) register as a snapshot.

- **Modify**

Modifies a stored snapshot according to the currently defined Define Memo. The state of all currently in the Define Memo enabled entities will be changed in the selected snapshot to the currently adjusted state, e.g. if the border color of a wipe effect has to be changed from red to green in a already stored snapshot you have to select this snapshot, enable only the wipe in the Define Memo and adjust the mixer to the state where the border color is green. Then press Modify. The border color of this wipe now will be changed in the selected snapshot to green.

7.12.2 Define Memo Menu

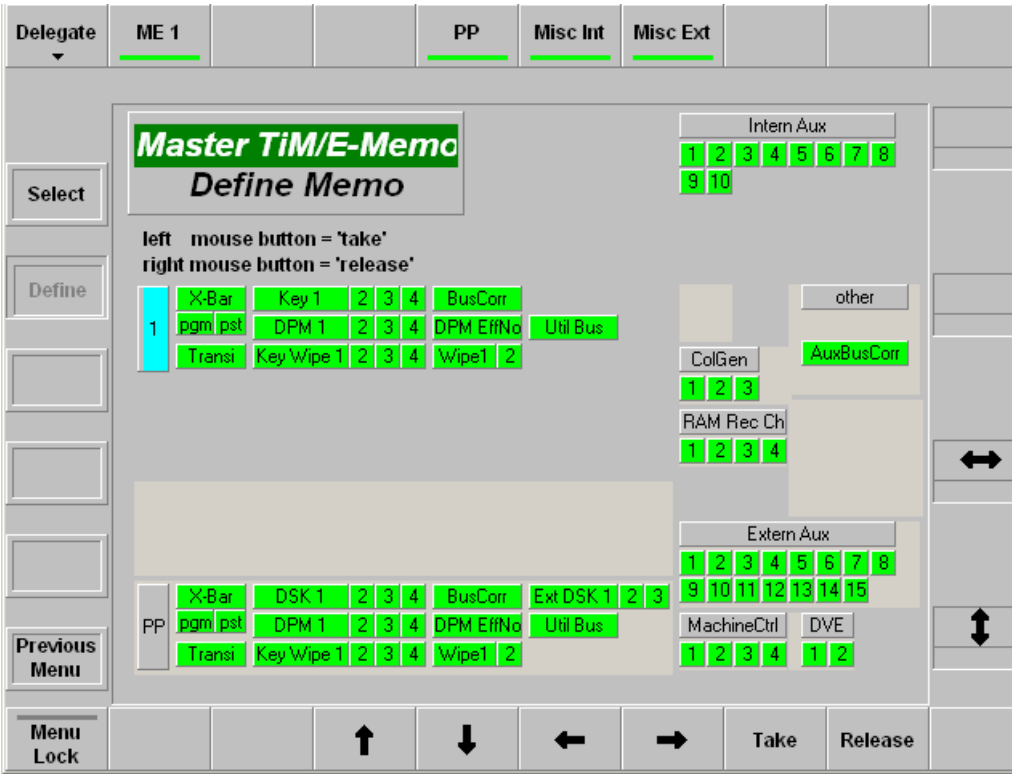


Figure 301 Sidepanel – Define Memo Menu

The menu indicates which switcher resources are stored in snapshots and timelines. For this purpose, a symbolic representation of the switcher appears in the menu.

Blue: Cursor position
Yellow: Selectable switcher functions
Green: Selected Switcher functions

ATTENTION!
Resource conflicts are possible. In the Define Memo menus of the M/E1..3 TiM/E Memo all resources not belonging to that M/E are “released” for default.

The X-Bar object in the menu Define Memo got the sub-entries **pgm** and **pst**. Thus, PGM sources and PST sources can be selected individually. The states of both are stored but only the activated bus will be recalled.

Example:

If PGM is disabled during Recall, the PGM row of the selected M/E is not affected by the snapshot recall (or timeline).

It is not recommended, to disable only one bus (PGM or PST) during Recall, in case of timelines that are including background transitions.

7.12.2.1 Dialog Buttons

- **Select Menu**
Selecting the TiM/E Memo Select menu.
- **Previous Menu**
Return to the previous menu. For details refer to section *Introduction*.

7.12.3 Edit Menu

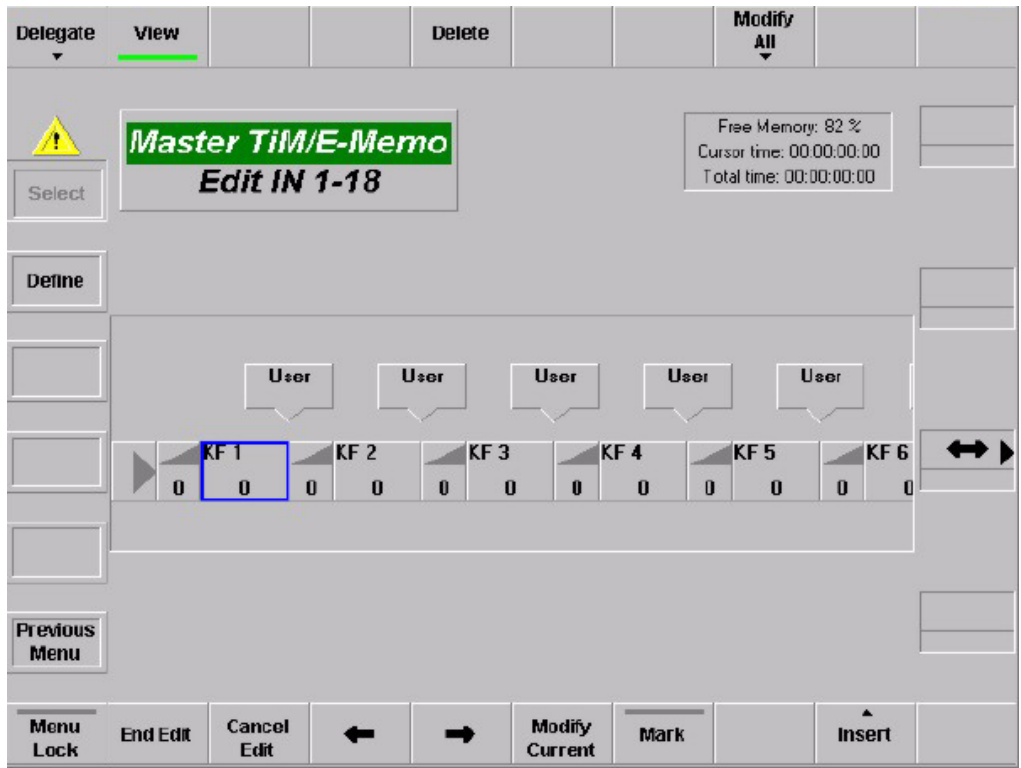


Figure 302 Sidepanel – Master TiM/E Memo Edit Menu

7.12.3.1 Dialog Buttons

- **Define**
Selecting the Define menu.
- **Previous Menu**
Return to the previous menu. For details refer to section Introduction.

NOTE!

If the edit mode is activated. The respective Select menu of the TiM/E memo cannot be selected.

7.12.3.2 Function Buttons

- **View**

On: If the user is going to edit a timeline, then he will see the results of his modifications and cursor movement in the video, i.e. if a keyframe or snapshot object will be selected, it will be recalled and displayed in the video.

Off: If the user is going to edit a timeline, then he will not see the results of his modifications and cursor movement in the video, i.e. the state of any object and the video will not be affected.

- **Delete**

Delete the keyframe marked with the cursor.

Selecting of the Modify All mode:

- **Modify All / Modify range**

If is range is selected, the changes refer only to this area, otherwise the changes are carried out in the entire timeline.



Simple:

Changes the parameters which can be adjusted with digipots and buttons absolutely on the adjusted value.

Advanced: The following functions change the keyframe contents:



Digipots Relative:

Changes the parameters which can be adjusted with the digipots in a relative amount, e.g. color, brightness, pattern size, clip level, etc.

Digipots:

Changes the parameters which can be adjusted with the digipots absolutely on the adjusted value, e.g. color, brightness, pattern size, clip level, etc.

Buttons:

Changes the state of values which can be adjusted with buttons, e.g. crosspoints, key modes, wipe pattern, rotation on/off etc.

Exchange Buttons:

This function changes only values which have a certain value. In order to set this value pressed previously the Set KF Ref button. Then enter the desired new value and press the Exchange Buttons button.

Example:

Exchange the circles in the time line through stars.

Selected wipe pattern no 119 (circle).

Press Set KF Ref.

Selected wipe pattern no. 131 (stars).

Press Exchange Buttons.

The following functions do not change the keyframe contents:

Transition → Duration

Changes all transition times.

Transition → Type

Changes the transition type (Linear / S-Linear).

Hold Time

Changes the hold time of the keyframe.

- **End Edit**
Close the edit mode with saving the modification.
- **Cancel Edit**
Cancel the edit mode without saving.
- **Left / Right Cursor**
Navigate the cursor inside the timeline
- **Modify Current**
The parameter listbox appears for the current selected object. If it is a keyframe, the parameter listbox shows the entry Store Keyframe [Yes/No]. The default value depends on whether View On or Off is selected. Store Keyframe [Yes] means that the keyframe data of the object are also stored when the listbox is closed with OK. I.e. there is a simple possibility to change the keyframe data.

When the listbox is opened, the cursor can be set with the mouse or the digipot to other objects in the timeline. The listbox then shows the state of the current selected object.

Double-clicking an object with the mouse opens the listbox just the same as the button Modify Current.

- **Mark**

This button enables selection of a range in the timeline. If a range is selected, the button Modify all changes its inscription into Modify Range. All modifications are performed in the selected range only.

- **Insert**

Insert an object in a timeline. For details see below.



Current: Insert a keyframe with the actual settings

Stored: Insert a stored Snapshot or Sequence.
Enter the desired number.

Wait: Insert a wait object GPI, User, TOD, Hold.

Trigger: Insert a trigger object GPO, DVE, Machine, Memo, MaKE, PBus.

Loop: Insert a loop object Begin, End

Note to insert a PBus Trigger/Register:

Under Insert > Trigger > PBus, a Trigger PBus command or a PBus Register command can be inserted into the timeline.

PBus Trigger:

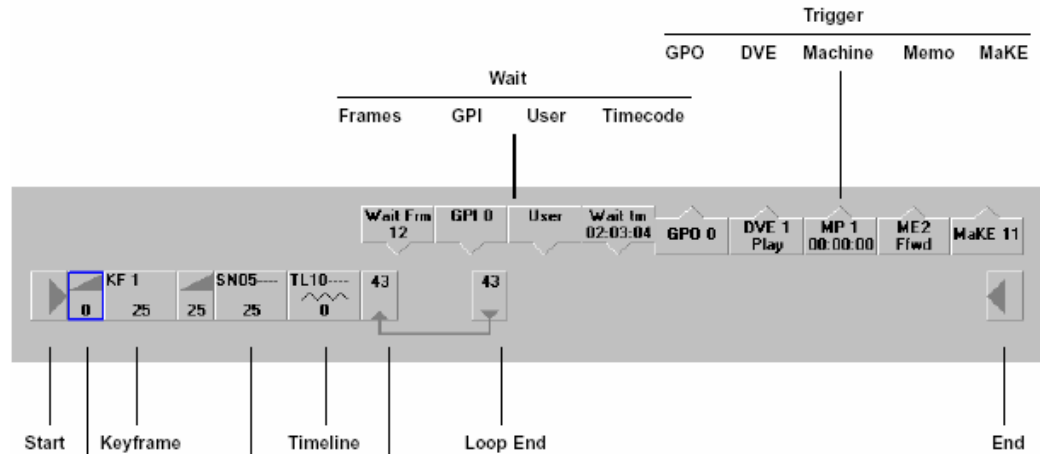
The listbox represents the machines and the meaning of the trigger for the machines. The first line in the listbox shows the numeric value of the trigger. All machines get the same trigger whose meaning, however, can be different for the individual machines. If the trigger is changed for one machine, in general, the display of the other machines is also changed as well as the numeric value of the trigger.

PBus Register:

In the first line, that register can be selected which has to be recalled. It shows the machines. For each machine, it can be individually selected whether the recall has to be performed or not.

7.12.3.3 Object Overview and Parameter Entry

The following section gives an overview on the objects with their parameters which can be inserted into a timeline.



Start:

Object is always available. Cannot be erased or inserted.

Transition:

Is automatically inserted before keyframe or snapshot.

Keyframe:

When inserting, also the parameters of the associated transition can be indicated.

Parameters: Duration
 Transition Type (linear, s-linear)
 Holdtime

External Snapshot:

When inserting, also the parameters of the associated transition can be indicated.

Parameters: Snapshot No.
 Holdtime

Timeline:

Parameters: Timeline No.

Loop Begin:

The loop can be changed on the Loop Begin as well on the Loop End symbol

Parameters: Loop count

<i>Wait Frames</i>	Parameters:	Frames
<i>Wait GPI</i>	Parameters:	GPI No.
<i>Loop End</i>	The loop can be changed on the Loop Begin as well on the Loop End symbol	
Parameters:	Loop count	
<i>Wait User</i>	Parameters:	–
<i>Wait TOD</i>	Parameters:	Time of Day
<i>Trigger GPO</i>	Parameters:	GPIONo.
<i>Trigger DVE</i>	Parameters:	Machine 1
Commands:	Play, Stop, FFWD, FREW 1	
<i>Trigger Machine MP</i>	Parameters:	Machine 1
Commands: Play, Stop, FFWD, FREW, Cue In, Cue Out, Goto,		
Variable 1		
Speed: only with command “Variable” 2		
Timecode: only with command “Goto” 2		
<i>Trigger Memo</i>	Parameters:	Machine 1
Commands: Play, Stop, FFWD, FREW, Goto, Variable 1		
Speed: only with command “Variable” 2		
Timecode: only with command “Goto” 2		
Default Register [yes/no]		
“Yes” means that the command is applied to the register just being selected in the TiM/E Memo control field. Register No [0 ... 99]		
“No” means that the command is applied to the register indicated under the register no.		

- 1 The parameter is already defined via the overlay menu.
2 Entry only possible with certain commands

Trigger P-Bus Trigger

Parameters: Trigger No
Machine 1: recall, no recall
:
Machine 24: recall, no recall

Trigger P-Bus Register

Parameters: Register No
Machine 1: recall, no recall
:
Machine 24: recall, no recall

Trigger MaKE Memo

Parameters: Memo No.

End

Object is always available. Cannot be erased or inserted.

7.13 Aux Menu

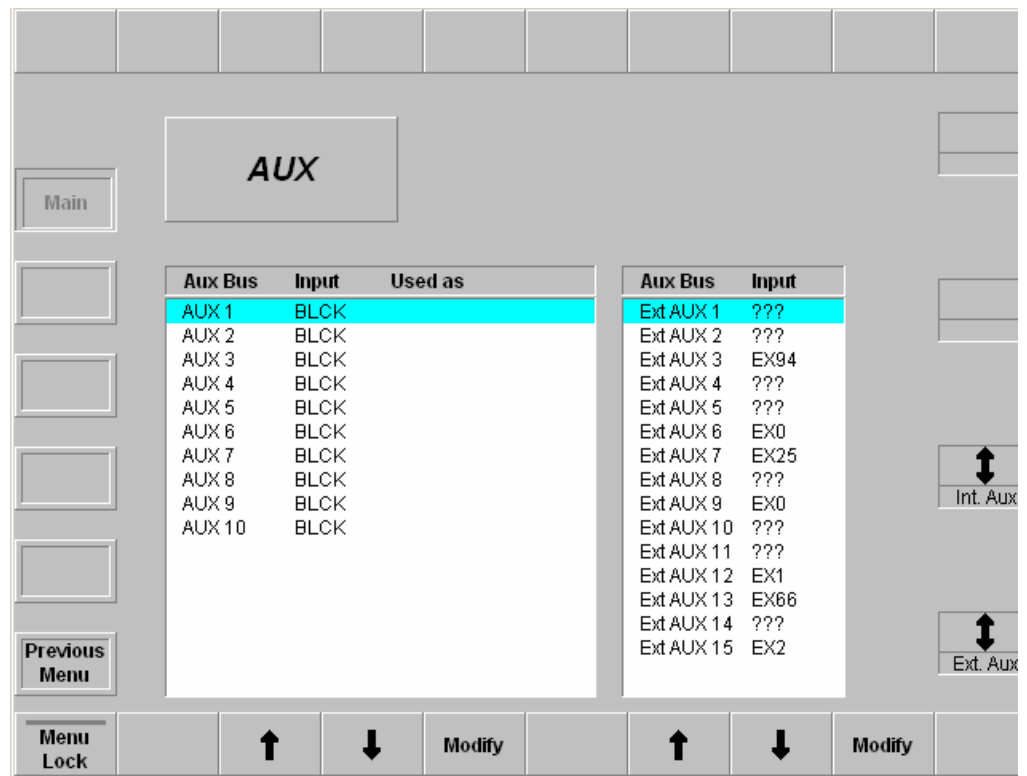


Figure 303 Sidepanel – Aux Menu

The Aux menu enables to select the sources on the individual internal and external aux busses. This is the only way to select aux sources from a sidepanel without pushbuttons (e.g. with DD35 GUI PC (Network Control Station)).

Select the aux bus with the cursor button and press Modify. Then select the desired aux source in a popup menu.

Input									
1	IN01	IN01	23	IN23	IN23	✓	c0	BLCK	BLCK
2	IN02	IN02	24	IN24	IN24		c1	COL1	COL1
3	IN03	IN03	25	IN25	IN25		c2	COL2	COL2
4	IN04	IN04	26	IN26	IN26		c3	COL3	COL3
5	IN05	IN05	27	IN27	IN27		c4	WHIT	WHIT
6	IN06	IN06	28	IN28	IN28		r0	RAM1	RAM1
7	IN07	IN07	29	IN29	IN29		r1	RAM2	RAM2
8	IN08	IN08	30	IN30	IN30		r2	RAM3	RAM3
9	IN09	IN09	31	IN31	IN31		r3	RAM4	RAM4
10	IN10	IN10	32	IN32	IN32		m0	MAIN	MAIN
11	IN11	IN11					m1	ME1	ME1
12	IN12	IN12					p0	PVWP	PVWP
13	IN13	IN13					p1	PVW1	PVW1
14	IN14	IN14					kp	PPKY	PPKY
15	IN15	IN15					k1	M1KY	M1KY
16	IN16	IN16					fp	CLNF	CLNF
17	IN17	IN17					f1	M1CF	M1CF
18	IN18	IN18							
19	IN19	IN19							
20	IN20	IN20							
21	IN21	IN21							
22	IN22	IN22							

>>> more >>>

8 *Glossary*

Auto Transition

A transition having a predefined duration generally initiated by pressing a control panel button.

Aspect

The ratio of a picture's horizontal and vertical dimensions when correctly displayed (4:3, 16:9).

Background Bus

A row of buttons on the M/E used to select background video signals. Typically labeled A and B, with A representing the current output, and B representing the next output.

Background Transition

A transition between the background video signals selected on the M/E.

Background Video

Video that forms a background scene into which a key may be inserted.

Backing Color

The color in a chroma key scene that will be replaced with another video signal.

Bit Rate

The number of bits per second passed from one point to another.

Black

A black video signal generated within the switcher.

Box Wipe

A rectangular wipe pattern. For masking, the KayakDD system provides a special box wipe pattern generator allowing independent control of the placement of each side of the box.

Chroma

The depth or saturation of color. Chroma, hue, and luminance make up the three characteristics of television color.

Chroma Key

A video key effect in which one video signal is inserted in place of areas of a particular color in another video signal. Blue and green are the chroma key colors most frequently used.

Clean Feed

A final output of the switcher that does not include downstream key effects or fade to black. Also see *Programmable Clean Feed*.

Clip

A threshold level adjustment to which the keying attribute (luminance, chrominance) is compared for generating the internal key control signal. Clip, in conjunction with gain, sets the switching point between the background and the key fill. Also see *Gain*.

Clip High, Clip Low

An alternative to Clip and gain keying, providing independent control of the points where the background video and the key fill video are each fully visible.

Complex Wipe Pattern Generator (Wipe1 + 2)

A wipe pattern generator with additional capabilities (for example, matrix wipes).

Component Video

A video signal that keeps color and luminance information separate. RGB; Y, R-Y, B-Y; and Y, Cr, Cb are examples of component video.

Composite Video

An encoded video signal that combines color information with luminance information. NTSC, PAL, and D-2 are examples of composite video.

Compositing

Combining two or more video signals together into one output signal.

Control Signal

A signal used to perform an alteration or transition of video signals. For example, control signals are used for keying, masking, and wipe transitions.

Control Surface

The set of controls available to a single operator. These controls may reside on separate but related control panels.

Cross Fade

See *Mix*.

Crosspoint

An electronic switch, usually controlled by a button on the panel, that allows video or audio to pass when the switch is closed.

Cut

An instantaneous switch from one picture to another. Switching circuitry allows cuts only during the vertical interval of the video signal to prevent disruption of the picture.

VDR (Video Disk Recorder)

A video recorder and playback device using hard disk storage in place of video tape.

Delegate

To assign panel controls to a particular operating function. Some panel controls (buttons, knobs, Positioner) can affect more than one function. The operator can choose an alternative function by delegating the panel controls to that function (typically by pressing or holding down a panel button).

Deserializer

A device that converts serial digital information to parallel.

Dissolve

See *Mix*.

DPOP (Double Press Open)

Pressing a control panel button twice rapidly to open a related menu. On the KayakDD system, buttons supporting DPOP are labeled with a graphical indicator.

Effect

A setup of panel controls specifying the sources involved and any processing applied to those sources. Effects can be learned (saved) and recalled by the E-MEM effects memory system.

Effect Transition

Recalling an E-MEM effect so that a transition is automatically performed at the start of the recall.

Effects Processor

The portion of a switcher that performs mixes, wipes and cuts between background and/or effects key video signals.

E-MEM Effects Memory

A feature that permits control panel setups to be stored for later recall.

Engineering Setups (Installation)

On the KayakDD system, a collection of settings that establishes an essential baseline for system operation and integrates the KayakDD system into a facility.

Ethernet

A form of high speed data transport between devices on a network.

Fade To Black

A mix transition to black.

Field

One scan of an interlaced video image. In interlace systems, two fields are required to make a complete picture (video frame) because alternate lines are scanned.

Fill Video

A video signal which fills a hole cut in background video by a key control signal.

Flip-Flop

A transition where the sources selected on the background buses (for example, preset and program) of an M/E are exchanged at the end of a transition. The original preset bus source becomes selected on the program bus, and the original program bus source becomes selected on the preset bus.

FPGA

Field Programmable Gate Array.

Frame

One complete scan of a video image. For interlace video, alternate lines are scanned, and so a frame containing all the picture information consists of two fields.

Frame Rate

The number of frames presented per second. For interlace systems the frame rate is half the field presentation rate.

Gain

An amplification factor applied to a key control signal by a keyer that determines how much, if any, of the background and key fill video will be mixed together at the key edge areas. Low gain (1, or unity) generally results in a linear key.

General Purpose Interface (GP)

An interface that allows limited remote control of some of a device's functions.

GPI	General	Purpose	Interface	Input
GPO	General Purpose Interface Output			

General Purpose Interface (GPO)

An interface that allows limited remote control of some of a device's functions.

House Sync

Sync generated within a facility that is used as a reference for generating and/or timing other signals.

Hue

The location of a color on the color spectrum (i.e. red, yellow, green, blue). Chroma, hue, and luminance make up the three characteristics of television color.

Interlace

A system of video scanning where the odd and even numbered lines of a picture are presented consecutively as two separate interleaved fields. The two fields required to make a complete picture are called a frame.

Jitter

An undesirable variation in the timing of transitions in a digital signal.

Positioner

A hardware positioner with control of multiple axes.

Key

An effect where a portion of a background scene is replaced by a new video. Key cut and key fill signals are involved, though in some cases the same signal may be used for both (self key).

Key Cut

In key effects, the key cut signal is used to specify where to cut a hole in the background that will be filled with the key fill video. The key cut signal determines the shape of the key effect.

Key Fill

In key effects, the video signal which fills the hole cut in the background video.

Key Invert

Reversing the polarity of a key, such that material formerly keyed out will be keyed in, and vice versa.

Key Mask

A key mode which allows use of a wipe pattern generator to prevent some undesirable portions of the key cut signal from cutting holes in the background video.

Key Memory

A feature where the last keying and video processing settings for a source are retained and re-imposed when that source is re-selected. Default source memory values can be set for each source on each bus.

Key Priority

The stacking order of multiple keys. The keyed signal with the highest priority appears in front of all the others. Keyed signals appear below higher priority keys and in front of lower priority keys, in a stack. A key priority transition changes the order of the keys without changing the background output.

Key Frame

A complete definition of an effect at a single point in time. Default keyframe values can be set for a suite. See Snapshot.

Linear Key

A Luminance key with a special parameter Setting: gain 100%, Clip 50%.

Look Ahead Preview

Video that shows the result of the currently setup next transition.

Looping, Loop-Through

An input that includes two connectors. One connector accepts the input signal, and the other connector is used as an output for connecting the input signal to another piece of equipment. On KayakDD, only the analog reference input is loop through.

Luminance

The brightness of the picture or area of the screen being considered. Chroma, hue, and luminance make up the three characteristics of television color.

Luminance Key

A key effect in which the portions of the key cut signal that are greater in luminance than the clip level cuts the hole in the background scene. Generally used when the key cut and key fill signals originate from the same source. Luminance key clip and gain is adjustable.

Mask

See *Key Mask*.

Matte

Internally-generated color video which can be adjusted for luminance, hue, and chroma. Matte can be used to fill areas of keys and borders.

Matte Fill

Using matte video to fill the hole of a key effect.

Matte Generator

A video generator that produces matte signals.

M/E

Abbreviation of mix/effects, pertaining to the circuitry and controls involved in compositing video signals.

Mix

A transition between two video signals in which one signal is faded down as the other is faded up.

Multiplier

A control circuit in which a control signal is multiplied with one or more input video signals. The resulting video output level varies from full on to full off according to the state of the control signal.

Object

An individual functional area of a system, typically one of several having similar capabilities.

Pattern Border

A variable width border that occurs at the edges of a wipe pattern.

Pixel

A picture element. A pixel is a digital sample of the luminance and color values of a picture at a single point.

Profile

Model name of a Thomson Grass Valley Video Disk Recorder.

Point of Use

A location in the system where a resource is used. A resource is generally used at different locations at different times. However, with some resources it is possible to use the same resource at different locations at the same time.

Preset Bus

A row of source buttons used to select the source that will be output by the M/E during the next background transition. Also called the B bus.

Preset Pattern

A key effect in which a wipe pattern that has been preset to a desired size and location is used to cut the key hole. The characteristics of the pattern are set using pattern controls.

Preview

A video signal that is viewed before it is output by the switcher. See also *Look Ahead Preview* and *Switched Preview*.

Program Bus

A row of source buttons used to select the source for the current output of the M/E. Also called the A bus.

Programmable Clean Feed

A type of clean feed where different keys can be selected for inclusion or exclusion from the clean feed.

Recall

To restore a previous panel setup that has been learned using E-MEM.

Reclocking

The process of clocking the data with a regenerated clock to remove jitter.

Resource

A capability of the system, typically consisting of a set of circuitry.

Register

A place to store an effect.

Saturation

The degree of purity of a color. Adding white to a color reduces its degree of saturation.

Self Key

A key effect in which a single video signal serves as both the key cut and key fill.

Serial Digital Video

Passing video data bits in serial form (one bit after another), along a single wire.

Standard

Definition serial digital video (SMPTE 259M) operates at 270 MBits/sec (2 x 13.5 MHz x 10 bits).

Serial Interface

An interface which allows the switcher to be controlled remotely by a computer editor or other serial controller. Data is passed serially between the editor and the switcher at selectable baud (transmission) rates.

Serializer

A device that converts parallel digital information to serial.

Snapshot

An E-MEM with only one keyframe.

Soft Border

A wipe pattern border which is mixed on the edges to give a soft effect.

Soft Edge

A pattern edge between two video signals in which the signals are mixed for a soft effect.

Source

- 1) An external device providing video. A source may provide only one video signal, or it may provide two signals (key fill and key cut).
- 2) The video signal(s) from a source, along with the source definition information associated with that source.

SPOP (Single Press Open)

Automatically opening a related menu when a control panel button is pressed. On the KayakDD system, buttons supporting SPOP are labeled with a graphical indicator.

Stack

See *Key Priority*.

Still Store

A device that captures, saves, and outputs a still video image. On the KayakDD system the RAM Recorder option is a still store with additional capabilities, including animation.

Store (Learn)

To save a panel setup using E-MEM.

Sync

1) General term for a synchronizing signal or signal component. Digital systems generally employ an analog external timing reference signal (such as color black or tri-level sync) to synchronize different pieces of equipment. Within the digital signal itself, however, synchronizing information is carried by special digital codes inserted at the beginning and end of each active line.
2) In analog television systems, sync is the portion of the video signal which occurs during blanking and is used to synchronize the operation of cameras, monitors, and other equipment. Horizontal sync occurs within the blanking period in each horizontal scanning line, and vertical sync occurs within the vertical blanking period. A color black signal is often used for synchronizing different pieces of analog equipment.

Tally

A light which lights up to indicate that the associated button has been selected or to indicate that the associated input to the switcher is on-air.

Terminate, Termination

To complete a circuit by connecting a resistive load to it.

Transition

A change from one picture to another. Cut, mix, and wipe are transitions.

Vertical Interval

The portion of the video signal that occurs between the end of one field or frame and the beginning of the next.

Video Fill

A video signal used to fill the hole made by a key cut signal.

Video Path

The path that video takes through the switcher.

Wash Matte

A type of matte that contains two elements rather than a single flat color. For example, a wash matte can have one color that mixes gradually across the screen to another color.

Wipe

A transition between two video signals that occurs in the shape of a selected pattern.

Wipe Pattern Generator

Circuitry that creates patterns that can be used to create wipe transitions, preset patterns, key masks, and matte washes.

